

Environmental and Social Monitoring Report

Project Number: 44932-064
October 2015

INDIA: 145 MW Grid Connected Solar Project Ujjawala Power Private Limited Safeguards Monitoring Report (April 2014 to March 2015)

Prepared by Ujjawala Power Private Limited for the Asian Development Bank

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Environment and Social Safeguard Provisions & Compliance Management

Company	Ujjawala Power Private Limited
Project	25MW Solar Photovoltaic Power Plant
Location	Surendranagar District, Gujarat State, India
Commissioning Date	31 st March 2013
Reporting Period	01 April 2014 - 31 March 2015

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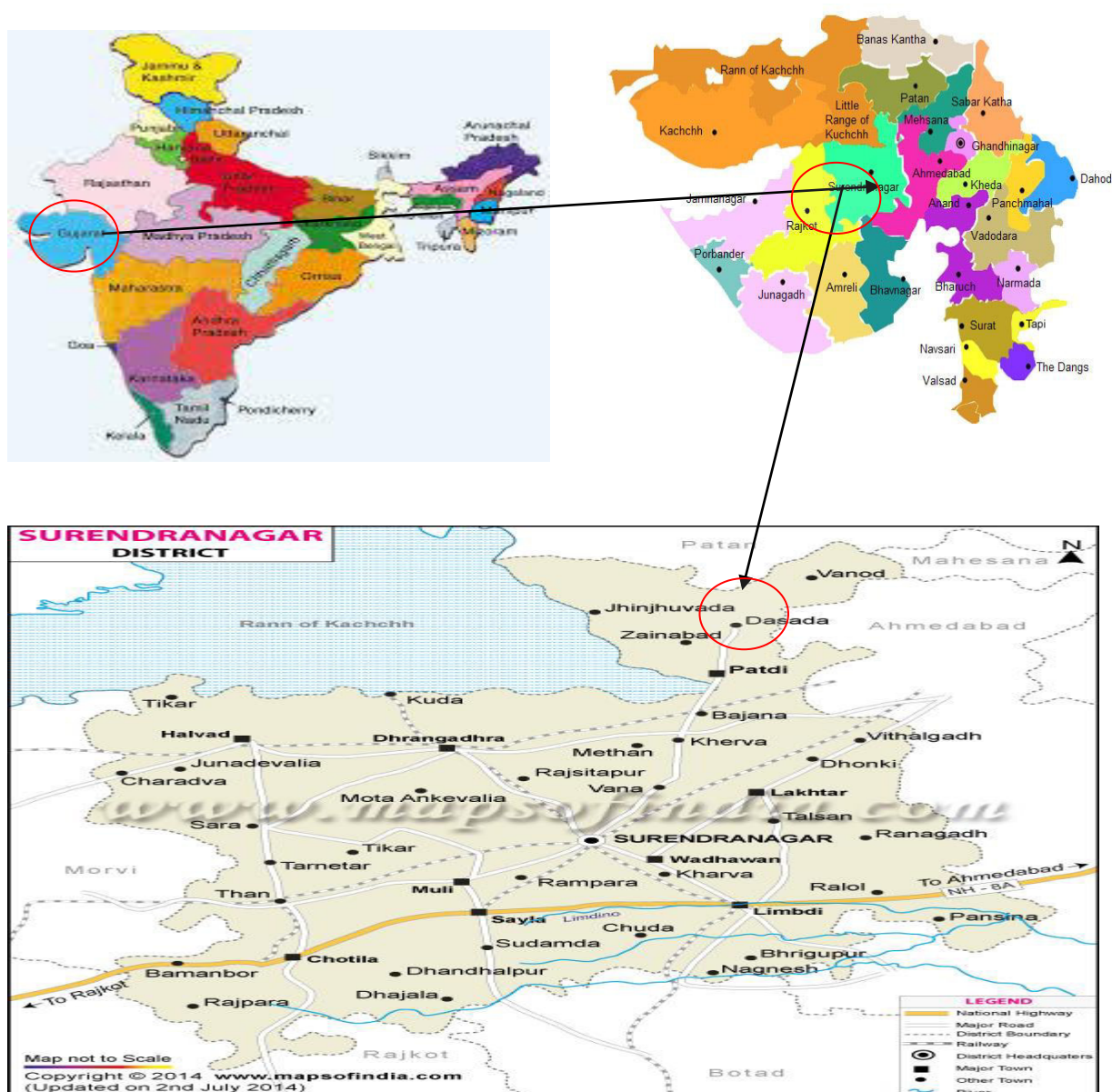
Contents

Chapter 1: Project Summary	3
Chapter 2: Environmental Permits and Compliances	5
Chapter 3: Grievance Redressal Mechanism	6
Chapter 4: Occupational and Community Health & Safety	7
Chapter 5: Environmental Management Capacity	8
Chapter 6: Social Safeguard Initiatives	10
Chapter 7: Compliance with Applicable Environmental and Social Requirements	11
Site Photographs	13

Chapter 1- Project Summary

Ujjawala Power Private Limited has setup a 25 MWp solar photovoltaic power project at Kamalpur village, Dasada Taluka, Surendranagar District in the state of Gujarat (India). The project got commissioned on 31st March 2013. The other relevant details of the project is given below

S. No	Particulars	Descriptions
1	Project site	Ujjawala
2	Village & District Name	Kamalpur and Rajpar, Surendranagar
3	Name of the state	Gujarat
4	Latitude & Longitude	23° 03' 27" N & 71° 51' 42" E
5	Road Accessibility	Road connectivity via Ahmedabad
6	Nearest Airport & City	Ahmedabad
7	Water requirement	13,000 LPD
8	Capacities of modules proposed (Wp)	The polycrystalline solar PV module. The project will comprise of a total of 94,344 modules of poly-crystalline type.
9	Commissioning Date	31.03.2013



Purpose/Objectives of Safeguards Monitoring Report

The purpose and Objective of Safeguard Monitoring Report is prepared in accordance with the Safeguards Requirements, for monitoring and measuring the progress of implementation of the Environmental Management Plan and including any corrective and preventative actions.

The Annual report for period from fiscal year 2014-15 is prepared on its compliance with the measures identified for social protection requirement and safeguard policy statement of ADB. As per the requirement, the company shall provide annual social safeguard report on its compliance to ADB pursuant to Safeguard Policy Statement

Chapter 2- Environmental Permits and Compliances

The company has already taken all necessary permits and clearance for operation and maintenance of the project under national and local statutory regulations. The details of requisite compliances are given below

Compliance	Consent No	Validity
Consent to Operate	AW-14092, Dated 31/05/2013	14/05/2018
O&M Labour License	Dated 01 Nov 2014	31/12/2015
Registration under Contract Labour Act	Registration dated 21/02/2012	One time registration

It's also pertinent to mention here that Ministry of Environment and Forests (MoEF) in its Office Memorandum No. J-11013/41/2006-IA.II (I) dated 13th May, 2011 stated that the Solar Photovoltaic Power Projects are not covered under the ambit of EIA Notification, 2006 and hence, no environmental clearance is required. Hence, the Solar Power PV Project does not require preparation of Environmental Impact Assessment Report and pursuing Environmental Clearance from Central Government or State Level Environmental Impact Assessment Authority.

Chapter 3- Grievance Redressal Mechanism

A Grievance Redressal Committee has been constituted & is already in operation at project site. The Grievance Redressal Committee (GRC) was formed at the project site to ensure affected person's grievances on both environmental and social concerns are adequately addressed. The GRC comprises the following members:

- Project Head
- Site In Charge
- Admin-Incharge

Grievance Redressal Mechanism for Local Community

- Admin-Incharge act as a focal point for recording & registering of grievances from local communities. The local communities during April-May 2015 months via informal discussion were informed to registers respective grievance (if any) to Admin-In charge only. The revised GRC system is also regularly updated via informal communication with panchayat heads & local community.
- The Site In-Charge is responsible for capturing, identifying, maintaining enquiries associated with community grievance in a register, and communicating progress to the concerned community member.
- A Register contains information such as date, time, location and names of villager and grievance; if any. The record will summarize what information was provided to or discussed with the the community member.

Record keeping

For record keeping purposes, A separate grievance redressal registers are maintained at plant level. The register contains information such as date, time, location and names of villager and the grievances, if any. The record also maintained about the information provided or discussed against the grievance.

Handling grievances

The company representative regularly visits nearby villages to capture project affected families grievances on continuous basis and record the same through public and individual meetings. Grievance Redressal registers are maintained at project site

There were no grievance reported at the project site

Chapter 4- Occupational and Community Health & Safety

There are no occupational hazards expected in the solar power plants during operational phase of the project. During the reporting period, There were no incidents reported of any safety event or outreach activities during the reporting period.

Training:

Training on following topics were provided at solar site

- *Preventive activity to stop snake (Reptile) entry in LT & HT Room*
- *Safety Value of PPE in Plant*
- *Safety Technical discussion on Insulation Tip*
- *EHS Awareness on daily basis related training*
- *Scrap Handling & Disposal*
- *Precaution for heat hazard & sunstroke during summer*

EHS Action Points:

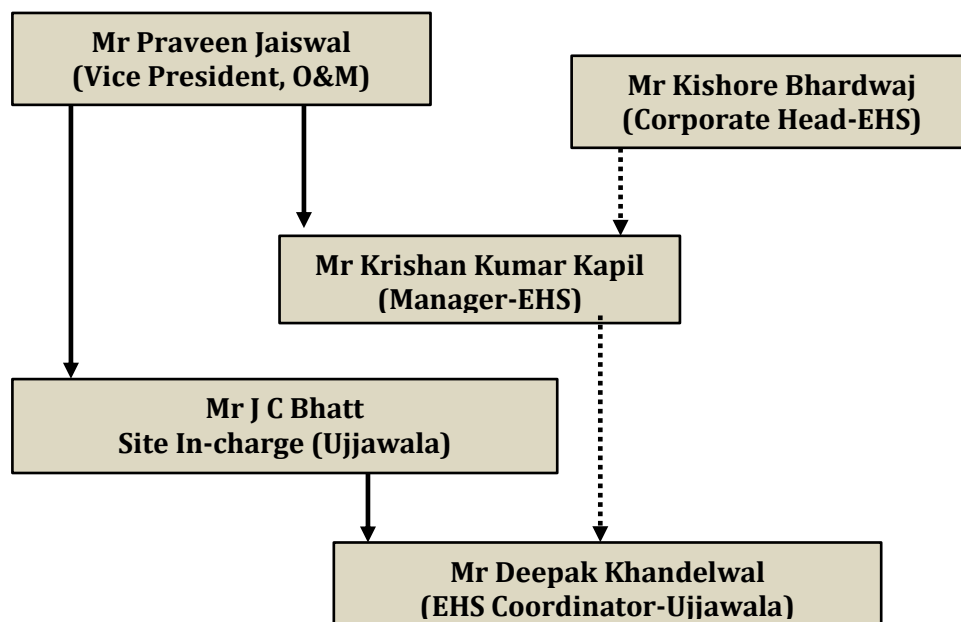
Few of the identified occupational Health & safety hazards along with respective mitigation measures are enlisted below:

Hazards	Mitigation Measures
Fire	<ul style="list-style-type: none">• Conducting monthly audit of Fire Extinguishers & sand buckets.• Regular cutting of grass from fire prone area• Conduct of live firefighting training
Electrocution	<ul style="list-style-type: none">• Provided rubber insulation mats across control room and LT room• Organizing regular training Programme on safety protocols.• Sensitizing associates towards importance of electrical safety• Provided all required PPE's.
Reptiles	<ul style="list-style-type: none">• Regular spray of Carbolic acid is performed at HT, LT and Control Rooms• Removal of overgrown grass around the snake prone areas• Made tie ups with local medical practitioner, Hospitals & doctor's for support during nay emergency in plants.

Chapter 5- Environmental Management Capacity

EHS Organization structure

The company has an EHS department at corporate and business unit level, headed by EHS&S Head Corporate. Following organizational structure is in place for the EHS team:



The duties of the EHS department at corporate & site level are to:

- Implement the EHS manual guidelines and environmental good practices at site.
- Advise and coordinate the contractor(s) activity towards effective management of environment, health and safety aspects.
- Train all company employees including contract workers at site to make them aware on various EHS practices and guidelines to be followed at site.
- Carrying out internal EHS audits at defined intervals, identify the existing EHS gaps at the site and report the findings of the audit to the EHS head.

Furthermore, two separate meeting namely EHS Core Committee and EHS Apex Committee meetings are being held every month. The participants include Corporate Head (EHS), Vice President (O & M) along with the site head and the EHS coordinator to discuss on the EHS perspective of the site. Furthermore, Weekly EHS report has also been compiled at site level and submitted to Corporate for review

EHS Committees	<ol style="list-style-type: none"> EHS Core Committee (HO Team) EHS Apex Committee (HO Team & Site Personals) <i>(Monthly review meetings are conducted among Core members & Apex committee members, Meeting are chaired by VP-Operations)</i>
Weekly EHS Status	<ol style="list-style-type: none"> Ujjawala solar site send Weekly EHS report to HO team The report contains following section: <ul style="list-style-type: none"> Training provided Work permit & LOTO Implemented Accident/Incident/Near Miss reporting (If any) Weekly EHS Observations and status Plantation & Hazardous waste management details

	<ul style="list-style-type: none">• Status or update on compliance, PPE's, Fire Extinguisher, etc• Weekly EHS site meeting details
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Chapter 6- Social Safeguard Initiatives

As the solar project has already been commissioned and in operation phase, there shall be no new land requirements/acquisition for this project. Also, during the year, following social safeguard activities were conducted.

<p>Women Empowerment Programme</p>	<p>On need basis, we engage approx. 5-6 local women labours for any non-technical works (like grass cutting, cleaning etc). We are committed to give preference to Women for any non-technical Labour site. We on timely conduct informal on various health other hygiene related activities</p> <div data-bbox="799 573 1163 837">  </div> <div data-bbox="1078 416 1422 667">  </div> <p>requirements at basis also training session related or any</p>
<p>Imparting Solar power knowledge to school children</p>	<p>Children from “Sanskar Public School” were invited for a site visit at solar site for an exposure & general awareness imparting on operation and benefits of solar power plants. The visit was conducted on 12 Nov 2014. Pics of the same are attached</p> <div data-bbox="537 1010 967 1294">  </div> <div data-bbox="1007 938 1399 1200">  </div> <div data-bbox="963 1234 1399 1518">  </div>

Chapter 7- Compliance with applicable Environmental and Social Requirements

Compliance status on the actual mitigation measures on each potential impact identified during Operation and Maintenance phase are given below.

1. Switchyard Operation

Potential Impact	Mitigation Action	Monitoring Frequency	Responsibility	Compliance Status
Safety risks	<ul style="list-style-type: none"> Regular safety training are imparted to employee on electrical safety Rubber mats are being provided near all high voltage areas 	Continuous	Site O&M team	Ongoing process
Soil contamination	Regular maintenance and monitoring of the transformers shall be carried out to avoid leakage of transformer oil	Annually		Rubber mats provided Ongoing and followed

2. Use of Ground Water Resources

Potential Impact	Mitigation Action	Monitoring Frequency	Responsibility	Compliance Status
Depletion of Ground water	<ul style="list-style-type: none"> Water meter is installed at water intake works to monitor total water consumption Water reduction measures through periodic checking of pipeline leakages Spills / wastages to be avoided and ensure optimal consumption 	Monthly Weekly	EHS Team	Daily water consumptions record are maintained and followed.
Domestic water consumption during the reporting period				
On an average approx. 230 liters per day of water is consumed at solar site for domestic utilization purpose				
Utilization per day		Utilization per month	Total (KL/annum)	
230		83950	8.39 Kl/annum	

3. Handling of broken solar modules

Potential Impact	Mitigation Action	Monitoring Frequency	Responsibility	Compliance Status
Land Contamination	Broken or damaged solar panels are immediately shifted to a designated	Continuous	Site in-charge and EHS team	Adherence to the procedure for waste

	area in scrap yard to avoid any type of land contamination. A photograph is to be taken of the broken panel at the site to cater to Insurance settlement claims			material handling and HSD/ Transformer oil/ Chemical storages
Health Risk	<ul style="list-style-type: none"> • Proper PPE are provided to the workers handling the broken solar panels • The workers at site are also on regular basis apprised about the potential health risks associated with handling of solar panels 	Continuous	Site in-charge, EHS and HR team	Followed

4. Handling of Domestic Waste

There is no canteen/cafeteria facility at site there is no domestic waste generation. However lunch brought by associates. In case any negligible waste it is disposed in small pit.

Site Photographs

Plant



Hazardous Waste Collection



PPE Display



Broken Module Storage



Soaking & Domestic Waste Pit



Plantation at Ujjawala Solar Power Plant during World Environment Day



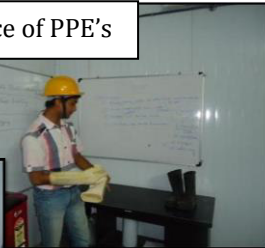
Training prograams



Importance of PPE's



Discussion on Safety



Technical Training

Other Pics

Air quality monitoring point



EHS Policy Display



Display of no child labor



Medical kit



EHS Display Board

