



SAMAR II ELECTRIC COOPERATIVE, INC.

Brgy. 6 Poblacion, Paranas, Samar
Tel. Nos. (055) 251-5645/ 0917-873-3454
samelcotwo@yahoo.com

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

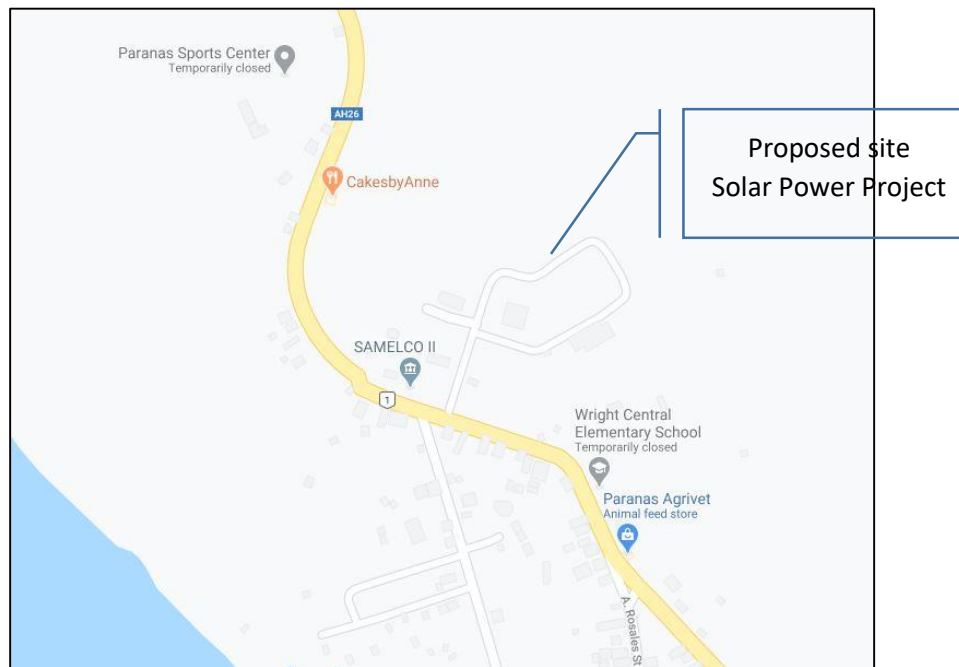
I. PROJECT DESCRIPTION

The Philippines headed by Department of Energy encourages electric cooperative to have Renewable Energy in their system, as stated in Chapter III Section 6, known as Renewable Portfolio Standard (RPS) that all stakeholders in the electric power industry shall contribute to the growth of the renewable energy industry of the country. The Solar PV Power Plant will give additional supply for Samar II Electric Cooperative, Inc. and eventually to help lessen the Generation rate of the Coop.

The solar power plant will be constructed by the EPC Contractor but the site preparation, which covers site clearing and perimeter fencing, will be undertaken by SAMELCO II. This ESMP is prepared by SAMELCO II for the pre-construction, site preparation, and operation up to decommissioning activities. The EPC Contractor shall prepare its ESMP for the construction phase or the CESMP. SAMELCO II will monitor the compliance with all the ESMPs while the NPC-PMO will be responsible for the overall supervision of compliance with the safeguards instruments including the ESMP.

- a. Name : Samar II Electric Cooperative, Inc.
- b. Type : Distribution Utility
- c. Purpose : Construction of Solar PV Power Farm
- d. Capacity : 1MWp
- e. Location (Included Vicinity Map): Fig. 1

Fig. 1





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- f. Project area : 1.5 hectares - located within SAMELCO II's property which has a total land area of 8.693 hectares and classified as an industrial land
- g. Components/Structures : Developer of the Project will provide the components and structures.
- h. Source of Water : Existing Deep well (Fig.3)



Fig. 3



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- i. Wastes to be generated (construction and operation): Material waste from Construction and Operation shall have Material Recovery Facility (MRF), Human waste materials, such as garbage, shall go to Municipal Dump Site.
- j. Useful life in years : 25-30 years

II. BASELINE CONDITIONS

The uncultivated areas are covered with cogon grass and secondary forest.





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a. Topography of the site (Topographic Map) : Fig. 2



Fig. 2



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- b. Soil Type : Clay Loam
- c. Nearest body of water : Buray Creek 1.1 km from the Project
- d. Vegetation type at the site : Grass and shrub
- e. Land use of the site and surrounding areas (include photos) :





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- f. IP groups present in the community and franchise area : We don't have IP's
in the community and in the franchise area.

Prepared by:

ENGR. ANDRO B. PLACIENTE

Detailed System Planning Engineer

ENGR. ALEXANDER ACOSTA

Energy Trading Officer

Checked by:

ENGR. GEMIL M. LONGARA, Jr.

Corporate Planning Manager

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
ACCESS TO SUSTAINABLE ENERGY PROJECT
RURAL NETWORK SERVICE – SAMAR II ELECTRIC COOPERATIVE, INC.
 Brgy. 6 Poblacion, Paranas, Samar

Project Phase	Activity	Potential Impacts	Mitigation Measures	Institutional Responsibility		Accomplishments For the period ____ to ____		
				Implementation	Supervision	Specific Measures Implemented	Date/ Period Implemented	Proof of Compliance/ Implementation
PRE-CONSTRUCTION	<ul style="list-style-type: none"> • Stakeholder engagement • Coordination with LGU, regulatory & other gov't agencies 	Exposure of EC's workers and the community to Covid19 virus	Minimize face to face interaction.	SAMELCO II	NPC - PMO			
			Follow DOH health protocols for Covid-19					
SITE PREPARATION	<ul style="list-style-type: none"> • Land clearing • Cutting and Disposal of Shrubs • Fencing 	Reduction of green areas	<ul style="list-style-type: none"> • Avoid cutting of trees and bamboo, trim only as much as possible. If tree cutting is necessary, conduct an inventory of trees that will be removed and secure Permit to Cut from the DENR/Phil. Coconut Authority, as may be required. • Plant vegetation to help increase the green areas. Plant native tree species, within the surrounding areas of the project site if possible, to replace trees that were cut. 	SAMELCO II	NPC - PMO			

		Soil erosion due to removal of vegetation and excavation during fencing	<ul style="list-style-type: none"> • Limit clearing of vegetation only to what is and where necessary. Minimize soil disturbance in the sloping portion of the site, or avoid if possible. • Implement appropriate erosion control/slope stabilization measures, as necessary. • Undertake re-vegetation/landscaping where applicable and as soon as possible. 	SAMELCO II	NPC - PMO			
		Potential deterioration of air and water quality in the immediate vicinity.	Spray water on exposed soil during dry weather, as necessary, to minimize airborne dust.	SAMELCO II	NPC – PMO			
			<ul style="list-style-type: none"> • Remove plants/trees/shrubs that were removed/cut and debris generated during site clearing/perimeter fencing and dispose of in coordination with the LGU to reduce airborne dust and avoid clogging of storm drainage systems • Use silt fencing or other methods to protect storm water drainage systems and adjacent properties from sediment/silt from the site. 	SAMELCO II	NPC – PMO			
		Increased surface runoff	Construct temporary trenches, as necessary, to enhance water infiltration and reduce surface runoff.	SAMELCO II	NPC-PMO			
		Health and safety hazards to workers and the community	<ul style="list-style-type: none"> • Ensure that site workers observe good housekeeping and sanitation practices • Collect, segregate and dispose of wastes including used face masks and face shields, in accordance with regulations. 	SAMELCO II, Contractor for Fencing, Workers	NPC-PMO, LGU			

			<ul style="list-style-type: none"> • Comply with the DOH and LGU health protocols against COVID-19 and DPWH guidelines for construction during the pandemic for construction during the pandemic. 					
		Possible conflict among workers and/or between workers and community due to cultural differences, improper behavior, harassment and discrimination	<ul style="list-style-type: none"> • Orient the workers on worksite rules and guidelines on behavior during implementation of works. • Source workers/hire qualified residents from the local community to avoid potential conflicts due to cultural differences. • Establish a Grievance Redress Mechanism for the resolution of project-related complaints/concerns. 	SAMELCO II	NPC-PMO			
OPERATION	Operation and maintenance of equip and solar panels	Use of groundwater (deep well) for cleaning of solar panels can reduce groundwater level	<ul style="list-style-type: none"> • Secure Water Permit for the deep well from the NWRB. • Use rain water as an alternative for the cleaning of solar modules Implement water conservation measures. 	SAMELCO II	NWRB			
		Safety and health risk to facility workers	<ul style="list-style-type: none"> • Comply with Renewable Energy Safety, Health and environment Rules and Regulations (RESHERR or DOE DC2012-11-0009) • Follow DOLE/DTI Interim Guidelines on Workplace Prevention and Control of COVID-19 and LGU Protocols • All electrical works must have a lock-out tag-out to ensure safety of workers and engineers 	SAMELCO II	DOLE/ LGU			

		Solid and hazardous wastes generated from the operation and workers' activities can contaminate soil and water resources	<ul style="list-style-type: none"> • Collection, segregation, storage and disposal according to regulations • Segregation, storage, labeling and disposal of hazardous wastes (used oils, used light bulbs, etc.) in accordance with DENR regulation (RA 6969) • MRF (Material Recovery Facility) shall be available in order to separate Solar PV materials from other waste. 	SAMELCO II	DENR, LGU			
DECOMMISSIONING	Dismantling, removal from site, disposal of solar panels and associated equipment/facilities	Soil and water contamination due to hazardous materials from the solar PV/ equipment	<ul style="list-style-type: none"> • Preparation and implementation of decommissioning plan, including collection of used PV cells and electrical/electronic wastes, proposed disposal methods, recycling opportunities • Backfilling of soil cavities created by removal of structures, re-vegetation of disturbed areas 	SAMELCO II and Contractor	NEA, DENR			

SAMELCO II personnel in charge of the ESMP implementation and monitoring is **Engr. Alexander E. Acosta**.

Prepared by:



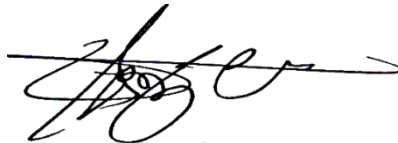
ALEXANDER E. ACOSTA, REE

Checked By:



GEMIL M. LONGARA, JR, REE

Approved By:



JOEY L. TALON, CPA

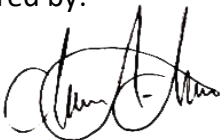
MONITORING PLAN
ASEP – RURAL NETWORK SOLAR PROJECT

PROPONENT: SAMAR II ELECTRIC COOPERATIVE, INC.

Project Phase	Parameter to Monitor	Standards	Frequency	Location	Responsibility for monitoring	
Pre-construction to De-commissioning	Stakeholder engagements	Coordination made with LGUs; community and other stakeholders are informed about the project, activities at the site and schedule	At least once prior to project implementation and as needed during implementation up to decommissioning	LGU offices, government offices, community near project site	SAMELCO II, NPC-PMO	
Site Preparation	Cutting of trees	Cutting of trees is properly coordinated with local DENR/PCA and secured a permit, if required	Once, during site clearing	Solar power plant project site	NPC-PMO	
Construction	Construction, debris, domestic garbage and hazardous wastes	Wastes, including used face masks/shields are segregated, stored and disposed of by Contractor according to regulations	Weekly	Construction site and workers' accommodation	SAMELCO II, NPC-PMO	
	Submission of required reports by the EPC Contractor	Reports on compliance with CESMP, ECoP, Health & Safety Manual, COHSP are submitted to SAMELCO II	Quarterly	Project Site	SAMELCO II, NPC-PMO	
	Work-related accidents	Zero accident	Daily	Project Site	EC PMO	
	Covid-19 cases at the project site	No personnel infected with Covid-19	Daily	Project Site	SAMELCO II, NPC-PMO	
	Sediment runoff from the site	Sediments are not washed by rain into storm drains or surrounding properties	Daily	Project site, adjacent properties	SAMELCO II, NPC-PMO	
	Re-vegetation/landscaping	Landscaping/re-vegetation of disturbed areas is undertaken by SAMELCO II Native trees to replace those that were cut are planted by SAMELCO II	After completion of construction	Project site Project site, vicinity, or site identified by DENR	NPC-PMO	
	Use of PPEs by personnel	Personnel use appropriate PPEs at all times where required	Random inspection	Construction site	SAMELCO II, NPC-PMO	
	Collection and disposal of sludge & wastewater from portable toilets	EPC Contractor has a signed contract with a DENR and DOH accredited waste transport and treatment service provider for the duration of solar power plant construction	Sludge Transporter and Treatment Facility have valid Environmental Sanitation Clearance from DOH and ECC from the DENR	Once, prior to construction	N/A	NPC-PMO, SAMELCO II
			Sludge transporter firm ensures that the collection/hauling of sludge from the site to the treatment facility is covered by a Manifest	Every sludge collection/transport activity	N/A	
	Quarry Permit	EPC Contractor secures copy of valid Quarry Permit (issued by the LGU) from the supplier of sand/gravel	Prior to procurement of materials	N/A	NPC-PMO, SAMELCO II	
	Grievances/Complaints	No complaint or few and minor project-related complaints.	Weekly	All locations	NPC-PMO, SAMELCO II	
		Complaints are resolved within 15 days through the Grievance Redress Mechanism				

Project Phase	Parameter to Monitor	Standards	Frequency	Location	Responsibility for monitoring
Construction and Operation	Safety signage	Signage are placed in appropriate places inside and outside of the project site by EPC Contractor	Prior to start of construction activities	Project/Solar Power Plant Site	NPC-PMO, SAMELCO II
Construction and Operation	Training/ orientation of personnel	EPC Contractor's workers undergo orientation/ training on environmental, health and safety	Prior to deployment of workers, and as needed during construction/ operation	Project/Solar Power Plant Site	NPC-PMO, SAMELCO II
Construction and Operation	Proper housekeeping	Work and accommodation areas are clean and orderly	Random site inspection	Work and accommodation areas	NPC-PMO, SAMELCO II
Construction and Operation	Domestic garbage and hazardous wastes	Garbage properly segregated and disposed of hazardous wastes stored and disposed of in accordance with regulations	Weekly	Solar power plant site	SAMELCO II
Operation	Use of PPEs by personnel	Personnel use appropriate PPEs at all times where required	Random inspection	Solar power plant site	SAMELCO II
	Work-related accidents	Zero accident	Daily		
	Covid19 cases at the plant site	No plant personnel infected with Covid19	Daily		
	Grievances/ Complaints	No or few and minor plant - related complaints; complaints resolved within 15 days	Weekly		
Decommissioning	Hazardous and solid wastes	All wastes disposed of in accordance with regulations	To be based on the work schedule	Solar power plant site and	SAMELCO II
	Work-related accidents/incidents	Zero accident/incident	Daily	Solar power plant site and	SAMELCO II
	Use of PPEs	Workers at the site wear appropriate PPEs	Random inspection		
	Site restoration	Soil cavities resulting from structure removal are backfilled and soil properly compacted; disturbed areas are re-vegetated	To be based on the work schedule	Solar power plant site	SAMELCO II

Prepared by:



ENGR. ALEXANDER E. ACOSTA
Energy Trading Officer

Reviewed and Checked by



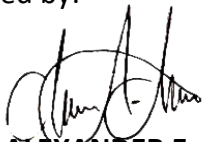
ENGR. GEMIL M. LONGARA, JR
Manager, Corporate Planning Department

**MITIGATION COST
ASEP – RURAL NETWORK SOLAR PROJECT**

PROPONENT: SAMAR II ELECTRIC COOPERATIVE, INC.

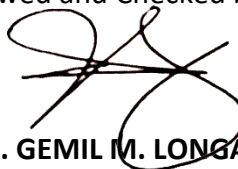
ASPECT		MITIGATION ACTION	COST (PHP)	RESPONSIBILITY
1	Health and Safety	PPEs for Covid19 (face masks, face shield, etc.), disinfectant PPEs during site clearing/fencing (hard hat, gloves, etc.)	135,000.00	SAMELCO II
2	Information campaign	Leaflets, posters, billboards, etc. Meeting with LGUs	20,000.00	SAMELCO II
3	Soil erosion due to site clearing/grading/ earthworks	Landscaping, Soil Bioengineering Wall and Tree planting,	540,000.00	SAMELCO II
		Site Clearing and Grubbing	450,000.00	SAMELCO II
4	Trainings	• BOSH Training for Safety Officer (SO)	21,600.00	SAMELCO II
		• Basic Pollution Control Officer's (PCO) Training	18,000.00	SAMELCO II
5	Permitting requirements	• Safety Officer accreditation fees (DOLE-BWC)	1,740.00	SAMELCO II
		• PCO accreditation fees (DENR-EMB)	700.00	SAMELCO II
		• Water Permit application fees (NWRB)	7,200.00	SAMELCO II
		• CNC fees	1,140.00	SAMELCO II
		• Locational Clearance Fees	14,000.00	SAMELCO II
		• LGU Construction Permits	37,700.00	SAMELCO II
		• NCIP Certificate of Non-Overlap	2,200.00	SAMELCO II
Total (PHP)			<u>1,249,280.00</u>	

Prepared by:



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Energy Trading Officer

Reviewed and Checked by:



ENGR. GEMIL M. LONGARA, JR
Manager, Corporate Planning Department



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GRIEVANCE REDRESS MECHANISM ASEP-RURAL NETWORK SOLAR PROJECT

Process	Interface	Responsibility
Receives RNS related complaint/ concern thru phone (Hotline number: +639959671222), email (samelcotwo@yahoo.com), social media (Facebook: Samelco II), in writing, or filed personally at the SAMELCO II Office; acknowledges and logs complaint	Complainant	SAMELCO II Consumer Welfare Development Officer (CDWO)
Evaluates nature of complaint	Complainant	Consumer Welfare Development Officer (CDWO)
Forwards complaint to concerned SAMELCO II department or the EPC Contractor.	Concerned Department / EPC Contractor	Consumer Welfare Development Officer (CDWO)
If it is determined that complaint cannot be resolved at the SAMELCO II level, forward complaint to the NPC-PMO.	NPC-PMO	Consumer Welfare Development Officer (CDWO), SAMELCO II Manager
Acts on complaint within 15 days upon receipt	Complainant	Concerned Department/Contractor
Validates action on complaint	Concerned Department / EPC Contractor	Consumer Welfare Development Officer (CDWO)
Updates data	Consumer Welfare Development Officer (CDWO)	Concerned Department
END OF PROCESS		

Prepared by:

ENGR. ALEXANDER ACOSTA

*Energy Trading Officer
Corporate Planning Department*

Checked by:

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Manager, Corporate Planning Dept.