



ECC-43-314-REP-12-D

# ENVIRONMENTAL COMPLIANCE REPORT FOR THE OSONA 5MW AC SOLAR PLANT OTJOZONDJUPA REGION, NAMIBIA

RENEWAL  
ENVIRONMENTAL CLEARANCE CERTIFICATE



NOVEMBER 2020

## TITLE AND APPROVAL PAGE

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## DEFINITIONS AND ABBREVIATIONS

DEA	Department of Environmental Affairs
ECB	Electric Control Board
ECC	Environmental Compliance Consultancy
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMF	Electromotive Force
EMP	Environmental Management Plan
ICNIRP	Commission of Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronics Engineers
MEFT	Ministry of Environment, Forestry and Tourism
MSDS	Material Safety Data Sheets
PPE	Personal Protective Equipment
PV	Photovoltaics

# 1 INTRODUCTION

## 1.1 PROJECT INTRODUCTION

Since 2010, InnoSun Energy Holding (Pty) Ltd (herein referred to as the proponent), a Namibian registered company, has been developing a portfolio of utility-scale solar photovoltaic (PV) plants to be connected to the Namibian electricity grid. Several sites have been identified, secured, and are currently operating. InnoSun Energy Holding (Pty) Ltd has created and owns special purpose companies for the development of each of the identified sites in different parts of Namibia. Osona Sun Energy (Pty) Ltd which is 100% owned by InnoSun Energy Holding (Pty) Ltd operates a 5MW AC Solar PV Plant constructed in 2015 on a privately owned Farm Osona Commonage No. 65, Portion 82 located near Okahandja in the Otjozondjupa Region. The land is situated 750 m northeast of Osona NamPower's substation (66/22kV, 10 MVA), which is 16 km south west of Osona settlement. The Osona Solar AC Plant comprise of approximately 21,600 solar panels on a Solar AC Plant which occupies a maximum of 16 ha out of 26 ha leased land, thus ensuring a minimum distance with the existing NamPower's substation. The site can be accessed via the B1 main road (refer to FIGURE 1).

An Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) was compiled by Risk- Based Solutions cc and submitted in April 2014, in order to support the application for an environmental clearance certificate for a 5MW AC solar PV plant. An ECC for a 5MW AC solar PV plant valid for a period of three (3) years was issued by the Environmental Commissioner in 2015 and renewed in September 2017 (APPENDIX B).

In terms of the Environmental Management Act. No. 7 of 2007 a renewal application for the project's environmental compliance certificate is required. As part of this application an environmental compliance review of the works undertaken on site and compliance with the Environmental Management Plan (EMP) is to be submitted to the Ministry of Environment, Forestry and Tourism (MEFT).

The project is fully constructed. No new impacts are expected in the operation of the infrastructure as this is a passive system. The overall environmental risk of the passive operating site is extremely low. Renewal of this environmental clearance certificate should be granted, and the requirement for ongoing renewals for this constructed site should be reviewed. Due to the fact that construction is complete and there are no new impacts from the operations of the solar plant, and that there is no change from year to year the requirement to renew the environmental clearance certificate seems futile.

### DISCLAIMER

*Due to the low risk of a passive solar operating site, this report has been compiled by means of a desktop study, including the revision of relevant reports and all records made available by the proponent. ECC did not conduct any field verification and therefore rely on the proponent's integrity to uphold conditions specified in the EMP.*

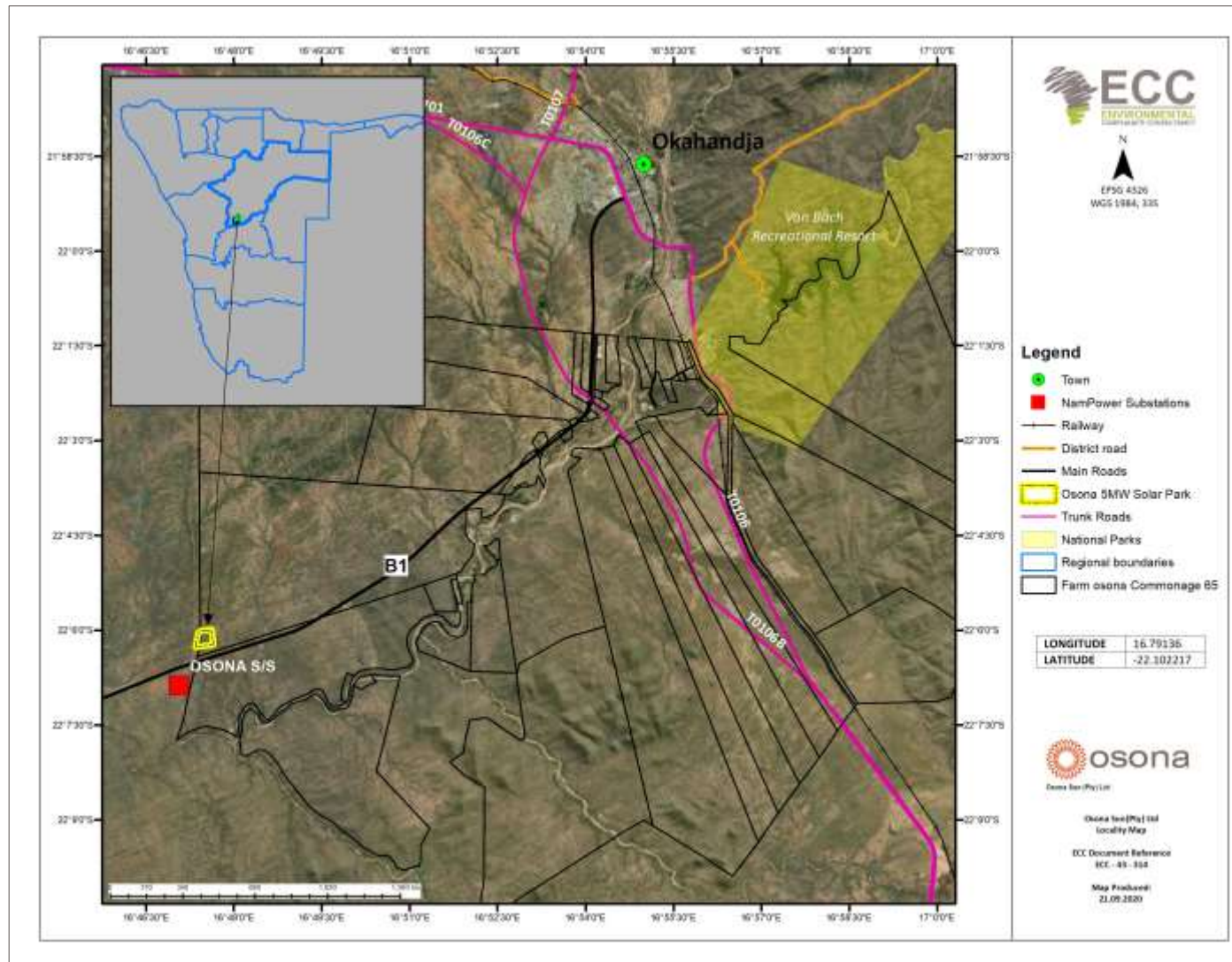


FIGURE 1 - MAP INDICATING THE LOCATION OF OSONA SUN ENERGY SOLAR PLANT

## 1.2 PURPOSE OF REPORT

Environmental Compliance Consultancy (ECC) have been appointed by the proponent to apply for their renewal of an environmental clearance certificate for the Osona 5MW AC Solar PV plant project. The purpose of this environmental compliance report is to document the findings of an environmental compliance audit covering the period from September 2017 to September 2020 which accompanies the renewal application.

## 1.3 PROPOSED RENEWAL AND ACTIVITIES

There are no new proposed activities for the project that should be considered in this environmental clearance certificate renewal.

## 1.4 ENVIRONMENTAL CONSULTANCY

Environmental Compliance Consultancy (ECC), a Namibian consultancy registration number 2013/11401, has prepared this report on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients in Namibia in the public and private sector. ECC is independent to the proponent and has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered.

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## 2 BACKGROUND OF THE PROJECT

Osona Sun Energy (Pty) Ltd is a Namibian registered company which believes in a renewable power generation in Namibia. The company has developed a 5MW AC solar energy generation facility known as the Osona Solar PV Plant on the privately owned Farm Osona Commonage 65, portion 82 which is near Okahandja in the Otjozondjupa Region. The project is important to the energy security, sustainable and renewable green energy development for Namibia, which will significantly reduce the national carbon footprint, and create a market for carbon credits and trading in the country. Osona was granted a Generation License No. G-130-01111-25 by the Electricity Control Board (ECB) within the provisions of the Electricity Act, 2007, (Act No. 4 of 2007).

The construction of the Osona Solar Plant project fell within the schedule of listed activities that required environmental clearance in terms of the Environmental Management Act, 2007. The EMP is the binding document to which a clearance certificate is granted to a proponent to carry out a proposed activity. This document is subjected to periodically auditing as the project activities transition from the earliest construction stage to the operation stage. The EMP is audited in order to monitor the progress of the project and ensure that all measures stipulated in the document are met and effectively adhered to as required by the Department of Environmental Affairs (DEA). In an event where the project activities alter, the EMP is required to be amended accordingly.

The project was granted a renewal environmental approval valid for a period of three (3) years on the 20th of September 2017 (attached). The following is the summary of the activities associated with the operational and rehabilitation stages of the solar plant that could potentially have an impact on the biophysical and social environments.

### **Operational Phase**

- Soar Energy Generation and Maintenance (for 25 Years)

### **Decommissioning and closure Phase**

- Decommissioning (After 25 Years) / Upgrade of Facility.



### 3 ENVIRONMENTAL COMPLIANCE AUDIT

#### 3.1 SITE INSPECTION

Due to the low risk of a passive operating solar plant, Environmental Compliance Consultancy (ECC) has not undertaken a site inspection for this project. This report was conducted through a series of desktop assessments, revision of relevant reports, and verification of owner documentation, and all records made available to ECC. The findings of this inspection are included in **Error! Reference source not found.** - 4.

#### 3.2 ANNUAL COMPLIANCE AUDIT

During the reporting period (2017-2020) the project has been fully operational. The project activities have been carried out in compliance with the approved EMP granted in terms of the Environmental Management Act, No. 7 of 2007.

In addition to the compliance audit, the EMP will be revised to identify gaps in order to recommend additional best practice measures that were not captured in the previous EMP.

#### 3.3 COMPLIANCE AUDIT FINDINGS

The section outlines the findings of the environmental audit completed for the project. It addresses obligations in terms of the key acts that govern the activities on the site, the commitments made in the EMP, and presents the findings and recommended corrective actions where applicable (TABLE 1 - 2).

TABLE 1 - OPERATION PHASE EMP AUDIT

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
1) All activities	– Management and Monitoring	– Social and Environmental Performance	– Ensure that all aspects related to the EMP are implemented during the operations phase. Adhere to the regulations, rules, and procedures as well as current and future regional and local and use plans.	– Compliant	– All aspects related to the EMP have been implemented during the operational activities and it will continue as such. Therefore, no evidence of non-compliance have been recorded.
2) All activities	– Consultation and Disclosure (EP 5)	– Social and Environmental Performance	– Consult with project affected communities in a structured and culturally appropriate manner throughout the operations phase. Consultation should be “free” (of external manipulation, interference or coercion, and intimidation), “prior” (timely disclosure of information) and “informed” (relevant, understandable and accessible information). – Adequately incorporate project affected communities’ concerns.	– Compliant	– Effective communication and transparency with affected communities have been maintained and will continue as such.
3) All activities	– Grievance Mechanism (EP 6)	– Social and Environmental Performance	– Ensure a mechanism for receiving and resolving any concerns and grievances related to the project’s social and environmental performance during the operations phase. – Address concerns promptly and transparently and in a culturally appropriate manner.	– Compliant	– Effective communication and transparency have been maintained. Therefore, no complaints received during the period, and a complaint register is available in the event a complaint is received in the future.

<p><b>4) All activities</b></p>	<ul style="list-style-type: none"> <li>– Training including awareness and inductions</li> </ul>	<ul style="list-style-type: none"> <li>– Social and Environmental Performance</li> </ul>	<ul style="list-style-type: none"> <li>– Train employees and contractors in matters related to the project’s social and environmental performance, Namibia’s regulatory requirements, and the requirements of the IFC Performance Standards.</li> <li>– Ensure adequate environmental awareness training for all personnel.</li> <li>– Give environmental induction presentations to all new personnel prior to work commencement.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– Employees and contractors have been trained with matters regarding the project’s social and environmental performance as well as Namibia’s regulatory requirements and will continue as such.</li> <li>– All site personnel have been provided with environmental awareness and training and will continue as such.</li> </ul>
<p><b>5) All activities</b></p>	<ul style="list-style-type: none"> <li>– Labour and Working Conditions</li> </ul>	<ul style="list-style-type: none"> <li>– Social and Environmental Performance</li> </ul>	<ul style="list-style-type: none"> <li>– Establish, maintain and improve the worker-management relationship. Base the employment relationship on equal opportunity and fair treatment and no discrimination to be allowed.</li> <li>– Comply with Namibia’s labour and employment laws and prevent unacceptable forms of labour, i.e. harmful child and forced labour.</li> <li>– Promote safe and healthy working conditions and the protection and promotion of worker health.</li> <li>– Document and communicate the Working Conditions and Terms of Employment.</li> <li>– Respect Collective Agreements and the right of workers to organize and bargain collectively.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> <li>– Workers management relationship has been managed successfully and Namibian labour regulations have been adhered to.</li> <li>– The work environment has been conducive for all project personnel and will continue as such.</li> </ul>
<p><b>6) All activities</b></p>	<ul style="list-style-type: none"> <li>– Employment and procurement opportunities</li> </ul>	<ul style="list-style-type: none"> <li>– Socio-economic</li> </ul>	<ul style="list-style-type: none"> <li>– Ensure local recruitment (of registered contractors or qualified and certified personnel, registered and certified with the appropriate statutory authority as per Electricity Control Board (ECB) licensee duty) and procurement to maximize benefit to region.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>

<p><b>7) All activities</b></p>	<ul style="list-style-type: none"> <li>Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Social and Environmental Performance</li> </ul>	<ul style="list-style-type: none"> <li>Adhere to all Namibian Health and Safety Regulations.</li> <li>Occupational Health and Safety Training to be provided to all employees.</li> <li>Ensure that qualified first aid can be provided at all times.</li> <li>Provide and ensure the active use of Personal Protective Equipment (PPE).</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>The National health and safety regulations have been adhered to.</li> <li>Employees have been trained on occupational health and safety and will be done so in the future as the project progress.</li> </ul>
<p><b>8) All activities</b></p>	<ul style="list-style-type: none"> <li>Community Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Social and Environmental Performance</li> </ul>	<ul style="list-style-type: none"> <li>Prevent communicable disease (e.g sexually transmitted diseases (STDs) such as HIV/AIDS transmission): provide surveillance and active screening and treatment of employees; prevent illness among employees in local communities (through health awareness and education initiatives); ensure ready access to medical treatment, confidentiality and appropriate care, particularly with respect to migrant workers; and promote immunization.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance recorded.</li> </ul>
<p><b>9) All activities</b></p>	<ul style="list-style-type: none"> <li>Unauthorized public access</li> </ul>	<ul style="list-style-type: none"> <li>Community Safety</li> </ul>	<ul style="list-style-type: none"> <li>Use gates on the access road(s) and the entire site must be fenced off.</li> <li>Solar Plant should not be accessible to anyone from the public.</li> <li>Notice or information boards relating public safety hazards and emergency contact details should be put up at the gate(s) and at the solar plant.</li> <li>Create a viewpoint area, possibly including an information centre, for the public/tourists.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance have been recorded.</li> </ul>

<p><b>10) All activities</b></p>	<ul style="list-style-type: none"> <li>Increased traffic/vehicle movement</li> </ul>	<ul style="list-style-type: none"> <li>Air quality (dust or Particulate Matter (PM) pollution)</li> </ul>	<ul style="list-style-type: none"> <li>Maintain the road surface to preserve surface characteristics (e.g. texture and roughness).</li> <li>Use dust control/suppression methods, such as applying water or non-toxic chemicals to minimize dust (oil and oil by-products is not a recommended measure to control road dust).</li> </ul>	<p>– Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non-compliance.</li> <li>All activities are done in accordance with the EMP and will continue as such.</li> </ul>
<p><b>11) All activities</b></p>	<ul style="list-style-type: none"> <li>Increased traffic/vehicle movement (exhaust from diesel engines)</li> </ul>	<ul style="list-style-type: none"> <li>Air quality &amp; Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>Fleet owners/operators to implement manufacturer recommended engine maintenance programs (to control vehicle emissions: Carbon Monoxide (CO), Nitrogen Oxide (NOx), Sulphur Dioxide (SO<sub>2</sub>), Particulate Matter (PM) and Volatile Organic Compounds (VOCs)).</li> </ul>	<p>– Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non-compliance.</li> </ul>
<p><b>12) All activities</b></p>	<ul style="list-style-type: none"> <li>Increased traffic/vehicle movement</li> </ul>	<ul style="list-style-type: none"> <li>Occupational and Community Safety</li> </ul>	<ul style="list-style-type: none"> <li>Adopt best transport safety practices by implementing the following measures: emphasize safety aspects among drivers; improve driving skills and require licensing of drivers; adopt limits for trip duration; avoid dangerous routes and times of day; and use speed control devices.</li> <li>Regularly maintain vehicles and use manufacturer approved parts.</li> <li>Use locally sourced materials (where possible) to minimize transport distances.</li> <li>Employ safe traffic control measures, including the use of traffic and safety warning signs and flag persons to warn of dangerous conditions.</li> </ul>	<p>– Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non-compliance.</li> <li>All activities are done in accordance with the EMP and will continue as such.</li> </ul>

<b>13) All activities</b>	<ul style="list-style-type: none"> <li>Storm water management</li> </ul>	<ul style="list-style-type: none"> <li>Attraction of species (birds and bats) to the area due to open water and subsequent injury, disturbance, or mortality of species</li> </ul>	<ul style="list-style-type: none"> <li>Implement appropriate storm water management measures so as to avoid the presence of open water in the area.</li> </ul>	<p style="background-color: green; color: white; text-align: center;">Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>
<b>14) Operational solar plant</b>	<ul style="list-style-type: none"> <li>Solar plant components</li> </ul>	<ul style="list-style-type: none"> <li>Species injury, disturbance (and potential alteration of behavior), or mortality</li> </ul>	<ul style="list-style-type: none"> <li>Implement monitoring programmes to study the potential impact(s) of the solar plant on birds and bats.</li> </ul>	<p style="background-color: green; color: white; text-align: center;">Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>
	<ul style="list-style-type: none"> <li>Hazardous waste management</li> </ul>	<ul style="list-style-type: none"> <li>Pollution of biophysical environment (soil and water)</li> </ul>	<ul style="list-style-type: none"> <li>Solar Plant to be equipped with oil absorption and collection systems.</li> </ul>	<p style="background-color: green; color: white; text-align: center;">Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>
	<ul style="list-style-type: none"> <li>Electromagnetic interference (television broadcasts)</li> </ul>	<ul style="list-style-type: none"> <li>Community and Health Safety</li> </ul>	<ul style="list-style-type: none"> <li>Install a higher quality or directional antenna or relocate/direct the antenna towards an alternative broadcast transmitter; or install an amplifier; or construct a new repeater station if a wide area is affected.</li> </ul>	<p style="background-color: green; color: white; text-align: center;">Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>
<b>15) General solar maintenance plant</b>	<ul style="list-style-type: none"> <li>Cleaning of panels to prevent dust and insect build-up</li> </ul>	<ul style="list-style-type: none"> <li>Resource use / depletion of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>Ensure all wash water is recycled. Ensure there are no leaks from all taps, pipes and fittings.</li> </ul>	<p style="background-color: green; color: white; text-align: center;">Compliant</p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>

	<ul style="list-style-type: none"> <li>– Periodic painting of tower structures</li> </ul>	<ul style="list-style-type: none"> <li>– Pollution of biophysical environment (soil and water)</li> </ul>	<ul style="list-style-type: none"> <li>– Conform to ISO 12944:1998 Paints and varnishes - Corrosion protection of steel structures by protective paint systems- Part 4: Types of surface and surface preparation.</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>
	<ul style="list-style-type: none"> <li>– Working at heights</li> </ul>	<ul style="list-style-type: none"> <li>– Occupational Safety</li> </ul>	<ul style="list-style-type: none"> <li>– Test integrity of structure(s) before work commences.</li> <li>– Implement a fall protection program (including training in climbing techniques and the use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers).</li> <li>– Establish criteria for use of 100% fall protection (the system should be fitting for the tower structure and movements (ascent, descent, and moving from point to point)).</li> <li>– Install fixtures on tower components to facilitate the use of fall protection systems.</li> <li>– Provide an adequate work-positioning device system to workers (with connectors on positioning systems compatible with the tower components to which they are attached).</li> <li>– Ensure proper rating and maintenance of hoisting equipment and training of hoist operators.</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>– All activities done in accordance with the EMP and will continue as such.</li> </ul>
<p><b>Generalsolar plant maintenance (15) Cont.</b></p>			<ul style="list-style-type: none"> <li>– Material of equivalent strength; replace rope safety belts before signs of aging or fraying of fibres become evident.</li> <li>– Workers to use a second (backup) safety strap when operating power tools at height.</li> <li>– Remove signs/other obstructions from poles/structures before work commences.</li> <li>– Use approved tool bags for lowering/ raising tools/materials to workers on elevated structures.</li> <li>– Avoid conducting maintenance during poor weather conditions (especially where there is a risk lightning</li> </ul>	<ul style="list-style-type: none"> <li>– <b>Compliant</b></li> </ul>	<ul style="list-style-type: none"> <li>– All activities are done in accordance with the EMP and will continue as such.</li> </ul>

			strikes).		
<b>16) Power Transmission and distribution</b>	<ul style="list-style-type: none"> <li>Electric and Magnetic Fields (EMF)</li> </ul>	<ul style="list-style-type: none"> <li>Occupational and Community Health</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that average and peak exposure levels remain below the reference levels developed by the Commission of Non-Ionizing Radiation Protection (ICNIRP).</li> <li>Reduce the EMF (from power lines, substations, or transformers) by applying engineering techniques (if levels are expected or confirmed above the recommended levels): shielding with specific metal alloys; burying transmission lines; increasing the height of the transmission towers; or modifications to size, spacing and configuration of conductors.</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>All activities are done in accordance with the EMP and will continue as such.</li> </ul>
<b>17) Power transmission and distribution</b>	<ul style="list-style-type: none"> <li>Hazardous materials management (insulating oils / gases (Polychlorinated Biphenyls (PCB) and Sulphur hexafluoride ((SF6) and fuels)</li> </ul>	<ul style="list-style-type: none"> <li>Pollution of biophysical environment (soil and water)</li> </ul>	<ul style="list-style-type: none"> <li>Minimize the use of SF6 (greenhouse gas).</li> <li>The use of PCBs has largely been discontinued (see IFC EHS Guidelines for Electric Power Transmission and Distribution for the management of PCBs should it be used).</li> <li>All activities, Hazardous materials management.</li> <li>Wood preservatives? Needed?</li> </ul>	<ul style="list-style-type: none"> <li>Compliant</li> </ul>	<ul style="list-style-type: none"> <li>All activities are done in accordance with the EMP and will continue as such.</li> </ul>



<p><b>18) Power transmission and distribution</b></p>	<ul style="list-style-type: none"> <li>– Live power lines</li> </ul>	<ul style="list-style-type: none"> <li>– Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>– Allow only trained/certified employees to install, maintain, and repair electrical equipment.</li> <li>– Deactivate and properly ground live power distribution lines before work is conducted on, or close to, distribution lines.</li> <li>– Ensure that live-wire work is conducted by qualified workers and in accordance to the specific safety and insulation standards.</li> <li>– Do not approach an exposed energized or conductive part (even if the worker is trained) unless: the person is properly insulated from the energized part (e.g. gloves) and vice versa; the worker is properly isolated and insulated from any other conductive part (live-line work).</li> <li>– Implement a Health and Safety Plan, detailing specific training, safety measures, personal safety devices and other precautions, where maintenance and operation is required within minimum setback distances</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– All activities are done in accordance with the EMP and will continue as such.</li> </ul>
<p><b>19) Power transmission and distribution</b></p>	<ul style="list-style-type: none"> <li>– Working at heights on poles/structures</li> </ul>	<ul style="list-style-type: none"> <li>– Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>– See General solar panel / plant maintenance, working at heights.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>
<p><b>20) Power transmission and distribution</b></p>	<ul style="list-style-type: none"> <li>– EMF</li> </ul>	<ul style="list-style-type: none"> <li>– Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>– Prepare and implement an EMF Safety Program containing information on: potential exposure levels in the workplace and the use of personal monitors; training of workers to identify EMF levels and hazards; the identification and establishment of safety zones (areas acceptable for public exposure vs. those with expected elevated EMF levels and that only properly trained workers may access); action plans dealing with potential or confirmed exposure of levels that exceed those developed by the ICNIRP and Institute of Electrical and Electronics Engineers (IEEE).</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>– All activities are done in accordance with the EMP and will continue as such.</li> </ul>

<b>21) Power transmission and distribution</b>	<ul style="list-style-type: none"> <li>– Electrocutation</li> </ul>	<ul style="list-style-type: none"> <li>– Community Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>– Use signs, barriers, and education to prevent public contact with potentially dangerous equipment.</li> <li>– Ground conducting objects installed near power lines.</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– All activities are done in accordance with the EMP and will continue as such.</li> </ul>
<b>22) All activities</b>	<ul style="list-style-type: none"> <li>– Water Management</li> </ul>	<ul style="list-style-type: none"> <li>– Resource use / depletion of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>– Implement a water conservation program, promoting the continuous reduction in water consumption and achieving savings in water pumping, treatment and disposal costs, commensurate with the magnitude and cost of water use.</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– All activities are done in accordance with the EMP and will continue as such.</li> </ul>
<b>23) All activities</b>	<ul style="list-style-type: none"> <li>– Hazardous materials management</li> </ul>	<ul style="list-style-type: none"> <li>– Pollution of biophysical environment (soil and water)</li> </ul>	<ul style="list-style-type: none"> <li>– Implement prevention and control measures for the use, handling and storage of hazardous materials.</li> <li>– Train workers on the correct transfer and handling of fuels and chemicals and the response to spills.</li> <li>– Immediately report and clean up any accidental hydrocarbon spill: Spill-Sorb, Drizzat Pads, Enretech Powder or Peat Moss can be used to clean up small spills; in case of larger spills, the spill together with the polluted soil should be removed and disposed of at e.g. a biological remediation site.</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>
		<ul style="list-style-type: none"> <li>– Occupational Health and Safety</li> </ul>	<ul style="list-style-type: none"> <li>– Implement hazard communication and training programs (including information on Material Safety Data Sheets (MSDS)) to make employees aware of workplace chemical hazards and how to respond to these.</li> <li>– Provide and ensure the active use of Personal Protective Equipment (PPE).</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>
<b>24) All activities</b>	<ul style="list-style-type: none"> <li>– Waste management: solid</li> </ul>	<ul style="list-style-type: none"> <li>– Air quality</li> </ul>	<ul style="list-style-type: none"> <li>– Avoid the open burning of waste (whether hazardous, or non-hazardous).</li> </ul>	<ul style="list-style-type: none"> <li>– Compliant</li> </ul>	<ul style="list-style-type: none"> <li>– No evidence of non – compliance.</li> </ul>

<p><b>25) All activities</b></p>	<ul style="list-style-type: none"> <li>Waste management: non-hazardous and hazardous</li> </ul>	<ul style="list-style-type: none"> <li>Pollution of biophysical environment</li> </ul>	<ul style="list-style-type: none"> <li>As per Waste Management Plan.</li> <li>Institute and maintain good housekeeping and operating practices; littering is not allowed.</li> <li>Non-hazardous and hazardous waste to be collected and stored separately:</li> <li>Non-hazardous waste to be transported to and disposed off at an approved waste disposal site.</li> <li>Hazardous waste: recycle petroleum (fuels and lubricants) waste products and collect and recycle batteries and print cartridges. The remainder to be transported to a recognized hazardous waste disposal site, with prior permission from the site operator / owner.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> </ul>
<p><b>26) All activities</b></p>	<ul style="list-style-type: none"> <li>Waste management: sanitary</li> </ul>	<ul style="list-style-type: none"> <li>Pollution biophysical environment</li> </ul>	<ul style="list-style-type: none"> <li>Portable toilets (1 toilet per 30 employees; preferred 1:15) to be provided on the site; contents to be collected by an approved contractor and disposed of at an approved sewage site. Unless there will be a sewage plant?</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> <li>Flushing toilets with French Drain have been constructed, situated at the office Block.</li> <li>All operational activities related to wastewater management were undertaken in accordance with the EMP and will continue as such.</li> </ul>
<p><b>27) All activities</b></p>	<ul style="list-style-type: none"> <li>Wastewater management</li> </ul>	<ul style="list-style-type: none"> <li>Pollution biophysical environment</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the discharge of process wastewater and/or sanitary wastewater and/or wastewater from utility operations and/or storm water to land conform to the regulatory requirements.</li> </ul>	<p>– <b>Compliant</b></p>	<ul style="list-style-type: none"> <li>No evidence of non – compliance.</li> <li>All operational activities related to wastewater management were undertaken in accordance to the EMP and will continue as such.</li> </ul>

TABLE 2 - DECOMMISSIONING AND CLOSURE PHASE EMP AUDIT

ACTIVITY/PROCESS	ASPECT	IMPACT	MANAGEMENT ACTIONS	COMPLIANCE	COMMENTS OR RECOMMENDATIONS
1) Decommissioning and Closure	– Decommissioning	– Social and Environmental Performance & Visual	<ul style="list-style-type: none"> <li>– Isolate (electrically) the solar plant from the substation.</li> <li>– Disassemble the steel tower sections and cut off at the top of the foundation concrete; rehabilitate the hardstand area.</li> <li>– Remove all above-ground substation infrastructure and re-use, recycle or dispose of it.</li> <li>– Conduct a site contamination assessment; remove any contaminated material and dispose of at an appropriate disposal facility.</li> <li>– Break up foundations in the substation and remove for disposal.</li> <li>– Dig up below-ground substation infrastructure and remove.</li> <li>– Conduct a validation survey to ensure that all contaminated material at the substation has been removed; remove any contaminated material and dispose of at an appropriate disposal facility.</li> <li>– Rehabilitate access tracks not required for ongoing land use activities.</li> <li>– Remove all other equipment, waste, etc. from the area.</li> <li>– Reshape all disturbed areas to their original contours.</li> <li>– Cover disturbed areas with previously collected topsoil and spread evenly.</li> <li>– Manually rip disturbed areas, where compaction has taken place, and cover the areas with previously collected topsoil.</li> <li>– Replant any previously removed native plant species in disturbed areas.</li> </ul>	– N/A	<ul style="list-style-type: none"> <li>– No decommission occurred.</li> <li>– This phase will be implemented as a joint collaboration between the proponent, the local authorities, and other key stakeholders.</li> <li>– Specific activities will be contained in a detailed decommissioning and closure plan</li> </ul>
2) Closure	– Loss of jobs and income	– Socio-economic	<ul style="list-style-type: none"> <li>– Implement a skills training programme during the operations phase.</li> </ul>	– N/A	– No decommission occurred.

## 4 CONCLUSION AND RECOMMENDATIONS

The Osona 5MW AC Solar PV plant project activities have been are being carried out in general compliance with the relevant requirements of the granted licence in accordance with the approved EMP. To date, there has not been significant impacts resulting from the project activities. It is recommended that the proponent continue to adhere to all environmental legislation and company standards to ensure that best practical environmental protection continues as the project activities progress.

On this basis, Environmental Compliance Consultancy is of the professional opinion that the proponent has been able to demonstrate compliance to the approved EMP and that the renewal for environmental clearance certificate (ECC) should be granted to the proponent for the activities at the Osona 5MW AC Solar PV plant.

### 4.1 NEXT STEPS

The proponent would like to continue with operation activities on the solar plant and there are no new proposed activities for the project that should be considered in this environmental clearance certificate renewal.

## APPENDIX A: HEALTH SAFETY ENVIRONMENT REPORTS

## APPENDIX B: ENVIRONMENTAL CLEARANCE CERTIFICATE



REPUBLIC OF NAMIBIA

### MINISTRY OF ENVIRONMENT AND TOURISM

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18 September 2017

#### OFFICE OF THE ENVIRONMENTAL COMMISSIONER

The Managing Director  
Osona Sun (Pty) Ltd  
P. O. Box 86524  
Windhoek  
Namibia

Dear Sir/Madam

**SUBJECT: ENVIRONMENTAL CLEARANCE CERTIFICATE FOR THE 5MW AC SOLAR PARK, PORTION OF LAND OSONA COMMONAGE 65, PORTION 82, OKAHANDJA, OTJOZONDJUPA REGION**

The Environmental Management Plan submitted is sufficient as it made provisions of the environmental management concerning the proposed activities. From this perspective, regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project.

On the basis of the above, this letter serves as an environmental clearance certificate for the project to continue. However, this clearance letter does not in any way hold the Ministry of Environment and Tourism accountable for any misleading information, nor any adverse effects that may arise from this project's activities. Instead, full accountability rests with Osona Sun (Pty) Ltd.

This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

Yours sincerely,

  
Teofilus Nghitila  
ENVIRONMENTAL COMMISSIONER



**"Stop the poaching of our rhinos"**

All official correspondence must be addressed to the Permanent Secretary