

**BACKGROUND INFORMATION DOCUMENT FOR THE PROPOSED ACWA POWER SOLARRESERVE
REDSTONE SOLAR PHOTOVOLTAIC POWER PLANT ON THE REMAINING EXTENT OF THE FARM NO. 469,
HAY REGISTRATION DIVISION IN THE NORTHERN CAPE PROVINCE**

ACWA Power SolarReserve Redstone Solar Thermal Power Plant (RF) Proprietary Limited
24 April 2018

Notice is hereby given in terms of Section 19 of the Environmental Impact Assessment Regulations (GN No. R.982 of 04 December 2014), and Government Notices R.983 and R.985 (as amended), published in Government Gazette No. 38282 of 04 December 2014, in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, that ACWA Power SolarReserve Redstone Solar Thermal Power RF (Pty) Ltd proposes to lodge an application for Environmental Authorisation by means of a Basic Assessment Report Process.

Notice is hereby given in terms of Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), that a Heritage Assessment will be conducted as part of the Basic Assessment Report Process undertaken.

INTRODUCTION

The ever increasing and growing demand for energy, as well the need to find more sustainable and environmentally friendly energy resources, have prompted developers to explore new energy generation options. In an effort to utilise renewable energy resources, the ACWA Power SolarReserve Redstone Solar Thermal Power Plant RF (Pty) Ltd proposes the development, construction and operation of a Photovoltaic (**PV**) Power Plant on the Remaining Extent of the Farm No. 469, located approximately 30 km east of Postmasburg in the Northern Cape Province (refer to Figure 2). The PV Power Plant technology involves the conversion of solar energy into direct current (DC) electrical power from semiconductors within solar cells (PV elements) when they are illuminated by sunlight (photons). Project will have a generation capacity of up to 20 MW (with battery storage). Power is generated as long as the PV elements are exposed to sunlight. The PV Power plant could use fixed or tracking systems.

The proposed Project Site is located within the institutional boundaries of the Tsantsabane Local Municipality and the ZF Mgcawu District Municipality. The Project is designed to allow the ACWA Power SolarReserve Redstone Solar Thermal Power Plant RF (Pty) Ltd (**Redstone CSP Project**) to generate renewable green energy for self-consumption in order to operate and run the Redstone CSP Project, as authorised under the National Environmental Management Act 107 of 1998 (NEMA) by the Department of Environmental Affairs (DEA) Ref. Nr 12/12/20/2316 (AM7). The inclusion of the PV Project component will allow the Redstone CSP Project to run off-grid and be 100% self-reliant.

Figure 1: ACWA Power SolarReserve Redstone Solar Thermal Power Plant



APPLICANT

ACWA Power SolarReserve Redstone Solar Thermal Power Plant (RF) Proprietary Limited

Contact Person: **Terence Govender**
Address: Office XX07001, 90 Grayston
90 Grayston Drive, Sandton,
2196

ENVIRONMENTAL APPLICATION PROCESS

In terms of the 2014 Environmental Impact Assessment (EIA) Regulations as amended in 2017, promulgated under Sections 24 and 24D of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), various aspects of the intended Project are considered listed activities which may have an impact on the environment, therefore requiring authorisation from the Department of Environmental Affairs (DEA) prior to the commencement of the Project. The ACWA Power SolarReserve Redstone Solar Thermal Power Plant RF (Pty) Ltd have appointed Environmental Management Assistance (Pty) Ltd (EMA) as the independent Environmental Assessment Practitioner (EAP) to the Project, in fulfilment of the legislative requirements with respect to obtaining an Environmental Authorisation (EA) for the Project. The proposed Project is to provide power to the authorised EA (DEA Ref. 12/12/20/2316 (AM7)) CSP facility,. The EAP considered all potentially relevant listed activities which may have an impact on the environment, therefore requiring authorisation from the Department of Environmental Affairs (DEA) prior to the commencement of such activities.

PURPOSE OF THIS DOCUMENT

This document aims to provide you, as an Interested and/or Affected Party (I&AP), with background information pertaining to the proposed Project and the Basic Environmental Impact Assessment (BA) process to be undertaken. Furthermore, the document advises how you can receive information pertaining to the Project and comment on the Project with respect to components that may be of interest or concern to you. The sharing of information forms the basis of the public participation process (PPP) and offers you the opportunity to become actively involved in the project from the outset. Public participation plays an important role in the undertaking of the BA Process, as input from I&APs ensures that all potential issues are identified and considered during the study. All stakeholders are therefore invited to register as an I&AP and to assist the project team in identifying potential impacts associated with the proposed development on the environment and further make suggestions regarding possible mitigation of identified impacts and/or feasible project alternatives.

HOW TO RESPOND

Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the person listed below.

Environmental Management Assistance (Pty) Ltd

Contact Person: **Taryn Bigwood**
Address: P.O Box 386
Sundra
2000
Cell: 076 398 2391
Fax: 086 226 7324
Email: info@emassistance.co.za

PROCESS TO BE FOLLOWED

An Application for Environmental Authorisation in terms of NEMA will be submitted to the DEA for the Project.

For the purpose of this application on the following listed activity requires authorisation.

GNR 983. (1): The development of facilities or infrastructure for the generation of electricity from a renewable resource where—

- (i) the electricity output is more than 10 megawatts but less than 20 megawatts; or
- (ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare;

excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs—

- a) within an urban area; or
- b) on existing infrastructure.

GNR 983. (27): The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for:

- (i) the undertaking of a linear activity; or
- (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

GNR 983. (30):

Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

GNR 985. (12):

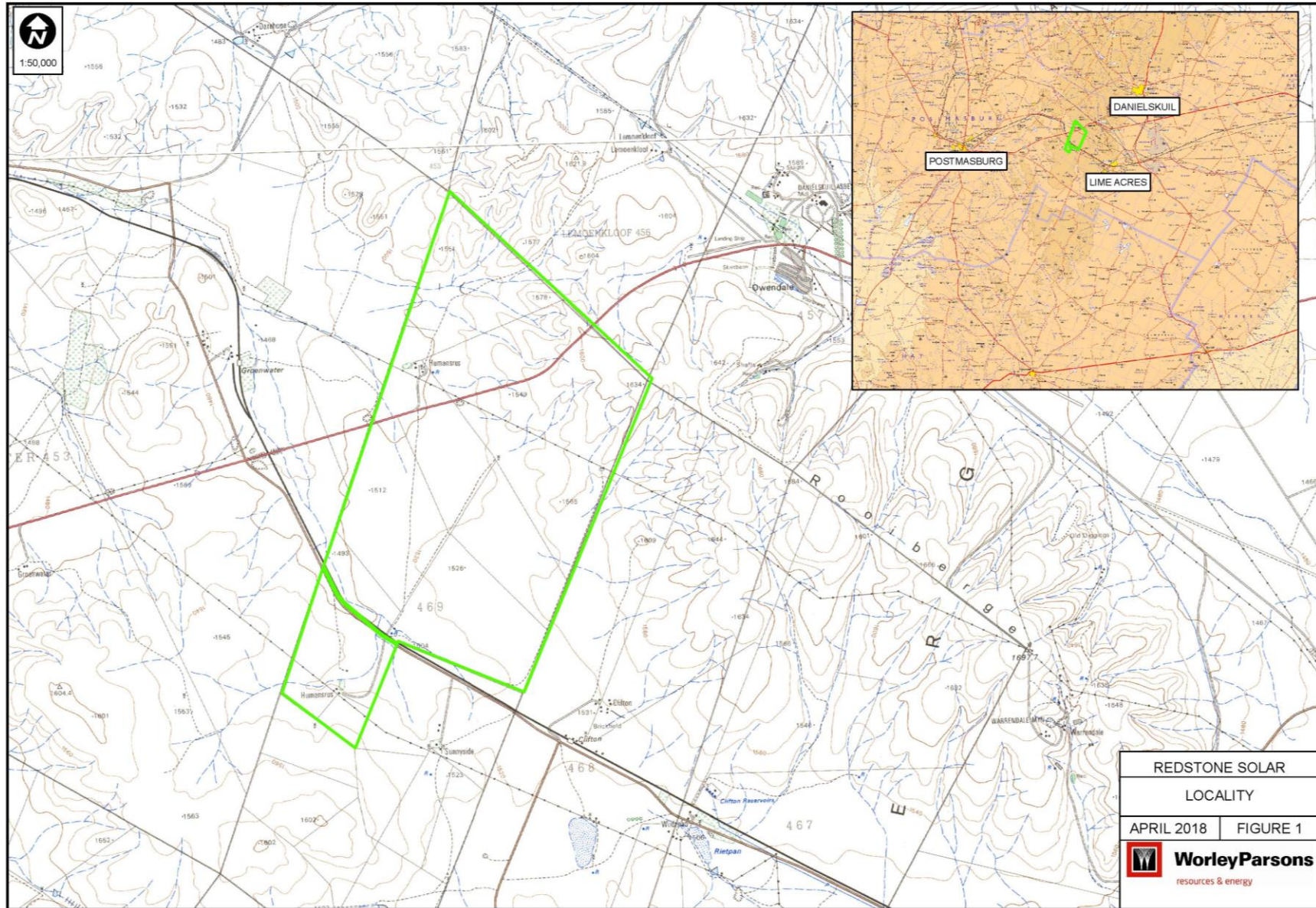
The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

g. Northern Cape

- (i) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;
- (ii) Within critical biodiversity areas identified in bioregional plans;
- (iii) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; or
- (iv) On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.

Kindly note that only registered I&AP's will receive follow-up information as the environmental process continues.

Figure 2: ACWA Power SolarReserve Redstone Solar Photovoltaic Power Plant Location



REGISTRATION AND COMMENT SHEET

PROPOSED ACWA POWER SOLARRESERVE REDSTONE SOLAR PHOTOVOLTAIC POWER
PLANT ON THE REMAINING EXTENT OF THE FARM NO. 469, HAY REGISTRATION DIVISION IN
THE NORTHERN CAPE PROVINCE

Please complete and return to:

Ms. T. Bigwood | 33 P.O. Box 386 Sundra 2200, Cell: 076 3982391 | Email: info@emassistance.co.za

DATE:	
TITLE:	
NAME:	
SURNAME:	
TELEPHONE NUMBER:	
CELL NUMBER:	
FAX NUMBER:	
EMAIL:	
POSTAL/PHYSICAL ADDRESS:	

ORGANISATION/FIRM/POSITION/NATURE OF INVOLVEMENT E.G. PROPERTY OWNER:

COMMENTS OR QUESTIONS:

PROJECT DESCRIPTION

The PV Power Plant component involves direct conversion of solar energy into direct current (DC) electrical power from semiconductors within solar cells (PV elements) when they are illuminated by sunlight (photons). The Project will have a generation capacity of up to 10-19MW (with battery storage). Power is generated as long as the PV elements are exposed to sunlight. The main components of a utility scale PV power plant include:

- Photovoltaic arrays and support structures;
- Power inverters to convert Direct Current (DC) power to Alternating Current (AC) power;
- Cabling to the power block/substation.

The Project is regarded as an auxiliary power supply for the Redstone CSP Project with the following infrastructure, already approved under the EA 12/12/20/2316, and regarded as shared infrastructure –

- electrical substation,
- Control and monitoring systems; and
- Additional support services and infrastructure such as access roads, water supply and treatment facilities and staff facilities.

CONSIDERATION OF ALTERNATIVES

In terms of the NEMA EIA Regulations, feasible alternatives are required to be considered during the EIA Process in terms of social, biophysical, economic and technical factors.

Regarding the Project Site location, alternatives were not considered as the Project will form part of the authorised Redstone CSP Project, a large scale solar power projects developed in 2012 in accordance with the requirements of the Department of Energy' (DOE) Renewable Energy Independent Power Producers Procurement Programme (REIPPPP).

The Redstone CSP Project was bid in the REIPPPP and received preferred bidder award in January 2015, and currently undergoing Financial Close.

POTENTIAL ENVIRONMENTAL IMPACTS

A number of potential environmental impacts associated with the Project have been identified. As part of the Redstone CSP Plant EA, the following environmental components were assessed in depth –

- Air quality assessment;
- Agricultural potential;
- Avi-fauna (birds);
- Biodiversity (fauna and flora);
- Geohydrology (groundwater);
- Heritage impact assessment;

- Hydrology (surface water);
- Noise impact assessment;
- Socio-economic assessment;
- Tourism assessment.
- Visual impact assessment; and
- Wetland delineation.

As part of this BA, the following specialists will provide an updated opinion considering the proposed facility expansion and the impact associated there with –

- Avi-fauna (birds);
- Biodiversity (fauna and flora);
- Heritage impact assessment;
- Socio-economic assessment; and
- Wetland delineation.

NEED AND DESIRABILITY OF THE PROJECT

The Redstone CSP Project is a utility-scale commercial renewable energy project, that was designed and developed to diversify the local energy generation 'mix' and reduce South Africa's dependency on non-renewable fossil fuel resources (i.e. coal). Emergency load shedding imposed by Eskom (national electricity utility) in 2007 and 2008 highlighted the challenges facing South Africa in terms of electricity generation, transmission and distribution. The looming threat of newly imposed load shedding (2018) due to coal supply shortages, has furthermore exasperated the need for decreasing the reliance on conventional coal fired power for the Country.

The National Energy Response Plan (**NERP**), acknowledged the role that independent power producers (**IPPs**) could play in ensuring sustainable electricity generation and supply for the Country. The demand for electricity in South Africa has been growing at approximately 3% per annum. This growing demand can be attributed to rapid economic growth and social development within South Africa and Southern Africa, which places significant pressure on South Africa's capability. Coupled with the rapid advancement in community development, is also the growing awareness of environmental impacts, climate change and the need for sustainable development. The inclusion of the PV Project component will allow the Redstone CSP Project to run off-grid and be 100% self-reliant.

BASIC ASSESSEMENT PROCESS

What is a Basic Assessment?

A Basic Assessment (BA) is a process of collecting, organising, analysing, interpreting and communicating information that is relevant for the consideration of a particular application. BAs are undertaken where the impacts are less likely to have significant impacts on the receiving environment. BAs are used by planning authorities/developers to obtain an independent and objective view of the potential environmental (biophysical and social) impacts that could arise during the construction and operation of the proposed development. This information needs to provide the Competent Authority with a sound basis for their decision-making. Environmental management and mitigation measures are also identified through the BA process.

Figure 3: Photovoltaic Power Plant

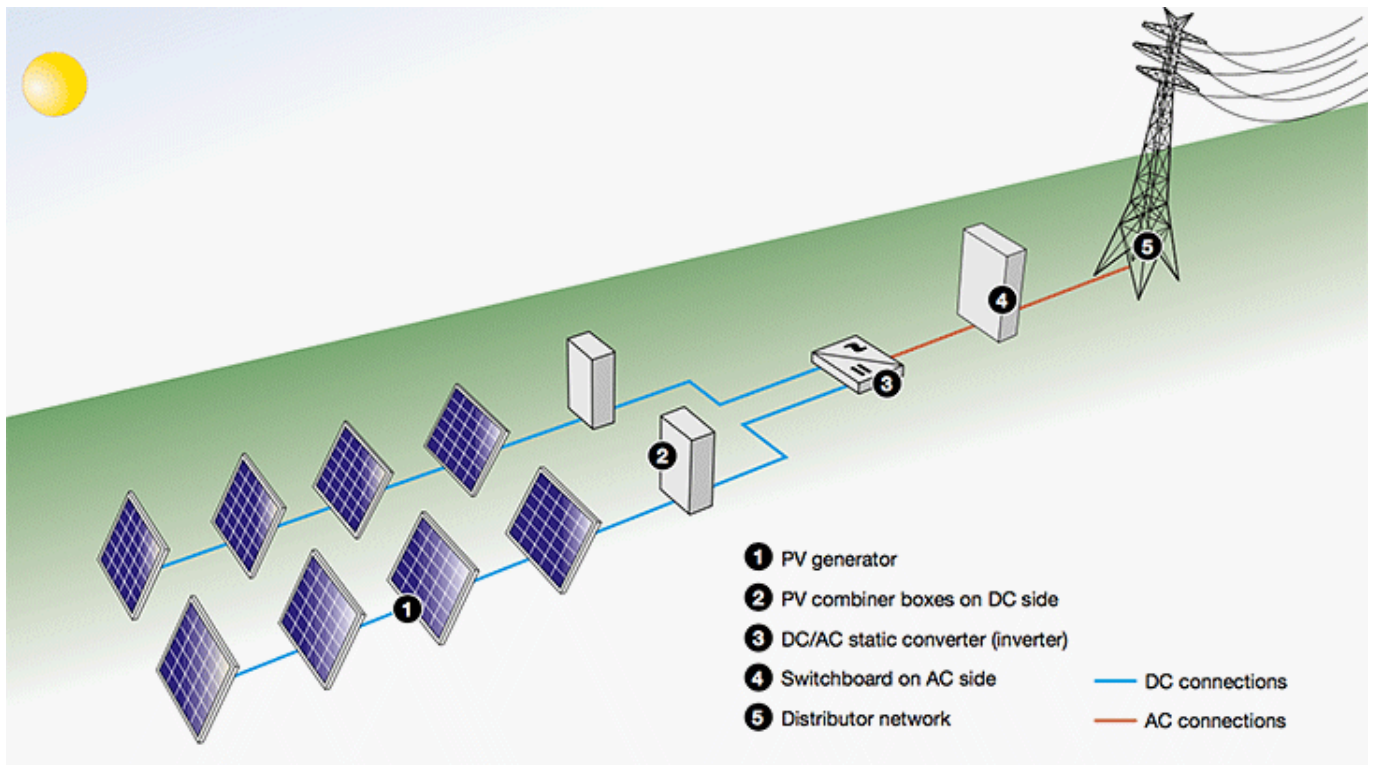


Figure 3 provides a visual representation of how a PV facility connects to the national grid, whilst Figure 4 provides examples of PV modules and their assembly.

Figure 4: Photovoltaic Modules & configuration



THE PUBLIC PARTICIPATION PROCESS

Public Participation forms an integral part of the EIA process and takes place throughout the duration of both the Scoping and EIA phases. The National Environmental Management Act (Act 107 of 1998) (NEMA) governs EIAs, including public participation. These include provision of sufficient and transparent information on an on-going basis to stakeholders to allow them to comment.

Effective Public Involvement

Effective public involvement is a vital component of the EIA process, and effective community involvement empowers communities to play an active role in the authorisation process. The PPP is designed to provide sufficient and accessible information to I&AP's in an objective manner to assist them to:

- Raise issues of concern and suggestions for enhanced benefits;
- Verify that their issues have been captured;
- Verify that their issues have been considered by the technical investigations; and
- Comment on the findings of the EIA.

WHO ARE INTERESTED AND/OR AFFECTED PARTIES?

Any person, company, authority or other entities that may be directly/indirectly affected by the proposed development can register as an I&AP. This includes, but is not limited to landowners, tenants, municipal and provincial authorities, interest groups, Non-Government Organisations and conservation groups.

A stakeholder database will be compiled through networking and advertising. All I&AP's are invited to participate in the consultation process by sharing inputs, comments and/or suggestions throughout the process. Please note that the process is structured according to timeframes and it is kindly request that adherence to the timeframes, which will be communicated to registered I&APs throughout the process, be kept. Input received will be included in an Issues & Response Register as part of the Scoping and EIA Reports to be submitted to the DEA.

Only registered I&APs will receive follow-up information as the environmental process continues. Stakeholders can at any time throughout the EIA register as an I&AP, taking note of certain activities and engagement opportunities that might have lapsed as a result of the fixed process and timeframes.

PUBLIC MEETING

As part of the Basic Assessment process, a public meeting will be held. All stakeholders are welcome to attend. The purpose of the meeting will be to introduce the proposed project, meet the Environmental Assessment Team, and record any comments and issues that attendees may have regarding the project and its potential impacts. The time, date and venue of this meeting will be communicated at a later stage to all registered stakeholders and I&AP's.

YOUR INVOLVEMENT

The purpose of an EIA is to provide the authorities with information that will allow them to make a decision on whether to give environmental clearance for the proposed project or not and, if approved, outline the conditions of approval. The contributions of stakeholders from all sectors of society assists informed decision-making.

In order to properly identify potential impacts and formulate a strategy for the prevention and management of identified impacts, your involvement in the EIA process will be of great value.

I&APs are also encouraged to identify and nominate any other parties deemed to be notified regarding this proposed development or to share this information document with them. These parties will be registered and contacted directly once nominated or identified.

All stakeholders are encouraged to participate and to submit any comments or information about the proposals, alternatives and impacts to consider that are deemed to be useful to the EIA process.

If you wish to register or comment, please complete the attached registration/comment sheet, write a letter (by post or fax) or email the contact person (as detailed on page 1), or simply attend the public meeting.