

FEBRUARY 2011

ENVIRONMENTAL BASIC ASSESSMENT PROCESS

**PROPOSED RUSTMO1 PV PLANT  
ON A SITE NEAR RUSTENBURG  
NORTH WEST PROVINCE**

12/12/20/2145

BACKGROUND INFORMATION DOCUMENT



**Momentous Energy**, as an independent power producer, has identified a viable site for the proposed establishment of a solar photovoltaic (PV) plant in the North West Province of South Africa. The site is located adjacent to the Marikana Platinum Mine, approximately 20 km east of Rustenburg.

The proposed project will be referred to as **RustMO1** and will have maximum generating capacity of 7 MW which will be evacuated into the national electricity grid as part of a power purchase agreement with Eskom and the South African Treasury.

#### **PURPOSE OF THIS BACKGROUND INFORMATION DOCUMENT**

This document aims to provide you, as an interested and affected party, with:

- » An overview of the proposed project;
- » An overview of the Environmental Basic Assessment process including the specialist studies being undertaken to assess the potential impacts of the proposed project; and
- » Details of how you can become involved in the process, receive information, or raise issues, which may concern and/or interest you.

#### **PHOTOVOLTAIC PLANTS AND THE EVACUATION OF ELECTRICITY INTO THE NATIONAL GRID**

Countries worldwide are being pressured to increase their share of renewable energy generation due to concerns related to climate change and the on-going, unsustainable exploitation of natural resources such as gas, oil, and coal. Government policy and the establishment of the South African Renewable Energy Feed-in Tariffs (REFIT) provides the opportunity for an increased contribution towards the sustained growth of the renewable energy sector locally, regionally and internationally. Under the National Energy Regulator Act, 2004 (Act No. 40 of 2004), the Electricity Regulation Act, 2006 (Act No. 4 of 2006) and all subsequent relevant Amendment Acts, the National Energy Regulator of South Africa has the mandate to determine the prices at and conditions under which electricity may be supplied by independent power producers under a generation licence.

The use of solar power for electricity generation is deemed a non-consumptive use of a natural resource which produces zero greenhouse gas emissions. Solar generated electricity is set to play a significant role in reaching the South African Government's renewable energy target of 10 000 GWh of renewable energy by 2013. PV technology uses the energy from the sun to generate electricity through a process known as the Photovoltaic Effect. Simply speaking, this refers to photons of light knocking electrons into a higher state of energy to create electricity.

#### **DESCRIPTION OF THE PROPOSED PV FACILITY**

The proposed solar PV facility is proposed on Portion 108 of the farm Spruitfontein 341 which is situated alongside the Marikana Platinum Mine (refer to the locality map in the centre of this document). The site which covers an extent of less than 20 ha is preferred based on several key factors including but not limited to proximity to an electricity evacuation point (i.e. Eskom's

Spruitfontein substation is situated adjacent to the site).

The facility will comprise of the following:

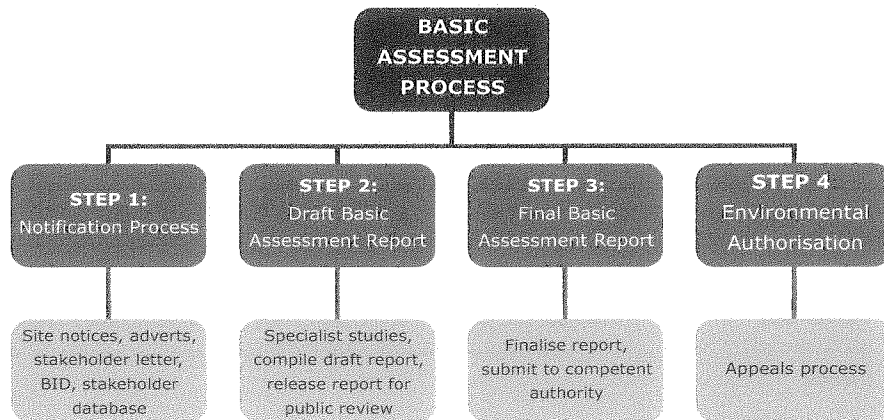
- » **PV cells** - a PV cell is made of silicone which acts as a semiconductor used to produce the photovoltaic effect. Individual PV cells will be linked and placed behind a protective glass sheet to form a PV panel; several rows of which will be established in order to generate 7 MW of power for evacuation into the electricity distribution grid.
- » **Inverters** - the photovoltaic effect produces electricity in direct current, therefore an inverter must be used to change it to alternating current which can be evacuated into the national Eskom grid.
- » **Support structures** - the PV panels will be fixed to a static support structure set at an angle so as to receive the maximum amount of solar radiation. The angle of the panel is dependent on the latitude of the proposed facility and the angles may be adjusted to optimise for summer or winter solar radiation characteristics.
- » **Power line** – in order to evacuate the power, a short power line will be established (either above ground or below ground) to the Spruitfontein Substation situated less than 90 m east of the site.
- » Internal access **roads**.
- » Storeroom, workshop, restroom and office **facilities**.

The PV panels are designed to operate continuously, unattended and with low maintenance for approximately 20 - 30 years. A facility consisting of several PV arrays with a generating capacity of 7 MW could take several months to construct and commission, and would require the expertise of skilled, semi-skilled and low skilled staff.

#### **BASIC ASSESSMENT PROCESS**

In terms of the EIA Regulations published in terms of Section 24(5) of the National Environmental Management Act (NEMA, Act No. 107 of 1998), Momentous Energy requires authorisation from the National Department of Environmental Affairs (DEA) (in consultation with the North West Department of Agriculture, Conservation, Environment, and Rural Development), for the construction and operation of the proposed PV plant. In terms of sections 24 and 24D of NEMA, as read with the EIA Regulations of GNR 543; GNR544; GNR545; and GNR546, a Basic Assessment process is required to be undertaken for the proposed project. This project has been registered with the National DEA under application reference number **12/12/20/2145**.

The Basic Assessment process is comprised of the following phases:



The Basic Assessment process will allow for the identification and assessment of potential environmental impacts resulting from the proposed project. Furthermore it will allow these impacts to be appropriately managed during the project's construction and operation phases. Lastly, this process will provide an opportunity for dialogue with interested and affected parties.

Momentous Energy has appointed Savannah Environmental, as the independent environmental consultants, to undertake the required Basic Assessment process to identify and assess potential environmental impacts associated with the proposed project, and propose appropriate mitigation and management measures as part of an Environmental Management Programme. As part of these environmental studies, interested and affected parties will be actively involved through a public participation process.

**POTENTIAL IMPACTS ASSOCIATED WITH THE PROPOSED PV PLANT**

Although a PV plant utilises a renewable resource to generate electricity, the construction and operation of the proposed facility has the potential to impact both directly and indirectly on the environment. A number of potential environmental impacts, both positive and negative, associated with the proposed facility have been identified and will be assessed through the following specialist studies:

- » **Ecology impact assessment:** the proposed project development site can be classified as a Greenfields site as it has been left to lie fallow for more than 10 years. The construction of the facility and the associated disturbance of vegetation may therefore affect the ecology and biodiversity of the site.
- » **Soil and agricultural potential impact assessment:** the construction of the facility may affect the underlying geology in terms of soil degradation and/or erosion. In addition, the proposed facility will occupy an area of 19ha which may result in the loss of agricultural land.



- » **Heritage impact assessment:** disturbance to or destruction of heritage sites and fossils may result during the construction phase through excavation activities.
- » **Desktop social impact assessment:** the construction and operation of the facility may result in positive socio-economic opportunities in terms of local employment as well as negative impacts in terms of safety, security, and land use characteristics.

Specialist studies will be guided by existing information, field observations (where necessary), and input from the public participation process.

#### **PUBLIC PARTICIPATION PROCESS AND YOUR RESPONSIBILITIES AS AN INTERESTED AND AFFECTED PARTY**

The sharing of information forms the basis of the public participation process and offers you the opportunity to become actively involved in the process from the outset. Comments and inputs from interested and affected parties throughout the process are encouraged in order to ensure that potential impacts are considered within the ambit of the study. The public participation process aims to ensure that:

- » Information that contains all the relevant facts in respect of the project is made available to interested and affected parties for review.
- » Participation is facilitated in such a manner that parties are provided with a reasonable opportunity to comment on the proposed project.
- » An adequate review period is provided for interested and affected parties to comment on the findings of the Draft Basic Assessment Report.

In terms of the EIA Regulations, your attention is drawn to your responsibilities as an interested and affected party:

- » In order to participate in the process, you must register yourself on the project database.
- » You must ensure that any comments regarding the proposed project are submitted within the stipulated timeframes.
- » You are required to disclose any direct business, financial, personal or other interest that you may have in the approval or refusal of the application for the proposed solar facility.

Interested and affected parties can involve themselves in the Basic Assessment Process via the following channels:

- » By responding (via phone, fax, or e-mail) to our invitation for your participation which has been advertised in local and/or national newspapers.
- » By completing the project reply form; in this way you are automatically registered on the project database, and are ensured that your comments, concerns, or queries raised will be noted.

- » By attending the public meeting to be held during the course of the project. As a registered party you will be invited to attend this meeting. The date for the public meeting will also be advertised in local and/or regional newspapers.
- » By contacting the consultants with queries or comments.
- » By reviewing and commenting on the Draft Basic Assessment Report within the stipulated 30-day review period.

We urge you to make use of the opportunities created by the public participation process to provide comment, or raise those issues and concerns which affect and/or interest you, and about which you would like more information. Your input into this process forms a key element of the process.

Please submit all reply forms, comments, queries, or responses to:

**Tammy Kruger**  
PO Box 148, Sunninghill, Johannesburg, 2157  
Phone: 011 234 6621  
Fax: 086 684 0547  
E-mail: [tammy@savannahsa.com](mailto:tammy@savannahsa.com)

To view project documentation, visit

[www.savannahSA.com](http://www.savannahSA.com)

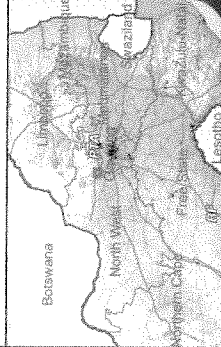
Copyright: Savannah Environmental

# Momentous Energy Photovoltaic Facility

## Locality Map

### Legend

- National Road
- Regional Road
- Secondary Road
- Railway Line
- Perennial River
- Non-perennial River
- Power Line
- Transmission Substation
- Distribution Substation
- Farm Portions









**ENVIRONMENTAL BASIC ASSESSMENT PROCESS  
PROPOSED RUSTMO1 PV PLANT NEAR BUFFELSPOORT,  
NORTH WEST PROVINCE**

---

***NOTICE OF THE AVAILABILITY OF THE DRAFT BASIC ASSESSMENT REPORT***

---

Momentous Energy, is proposing the establishment of a photovoltaic (PV) plant in the North West Province adjacent to the Marikana Platinum Mine, approximately 20 km south-east of Rustenburg and 10 km north-west of Buffelspoort. As part of the public participation process, interested and affected parties (I&APs) are afforded the opportunity to review the Draft Basic Assessment Report and to provide comment and/or feedback at a public meeting.

The Draft Basic Assessment Report has been prepared by Savannah Environmental and is available for public review from **07 March 2011 – 06 April 2011**. You are invited to review the report at one of the following locations:

- » Rustenburg Library
- » Rustenburg Local Municipality
- » [www.savannahsa.com](http://www.savannahsa.com)

All I&APs are invited to attend the public meeting to be held on:

**Date:** 31 March 2011

**Time:** 12:00 – 14:00

**Venue:** Rustenburg Library

Please do not hesitate to contact us should you require additional information and/or clarification regarding the proposed project. Comments on the Draft Basic Assessment Report can be made as written submission via fax, post, or e-mail.

Please submit your comments to
<b>Tammy Kruger of Savannah Environmental Affairs</b> PO Box 148, Sunninghill, 2157 Fax: 086 684 0547 Phone: 011 234 6621 E-mail: <a href="mailto:tammy@savannahsa.com">tammy@savannahsa.com</a>
The review period for members of the public ends on <b>06 April 2011</b>



**From:** MARIAGRAZIA GALIMBERTI  
**To:** cscheermeyer@sahra.org.za  
**Date:** 03/03/2011 08:51 AM  
**Subject:** Fwd: Notification of the review period for the Draft Basic Assessment Report for the proposed RustMO  
**Attachments:** Proposed RustMO1 PV Plant - Stakeholder Letter - Review of the Draft Basic Assessment Report.pdf; Background Information Document.pdf

Hello,

I'm afraid this is for you.  
G

>>> NANCY CLOETE 3/1/2011 12:51 PM >>>

>>> "Tammy Kruger" <[tammy@savannahsa.com](mailto:tammy@savannahsa.com)> 2011/03/01 12:35 PM >>>

Good day,

Please find attached the following with respect to the proposed RustMO1 PV Plant.

- Notification of the review period for the Draft Basic Assessment Report
- Notification of the public meeting on 31 March 2011
- A background information document

Please can you submit any comments or queries to Savannah Environmental.

Regards  
Tammy Kruger

**Tammy Kruger**  
**MSc (Environmental Science)**  
**Savannah Environmental (Pty) Ltd**

**Cell: 079 884 5123 / 074 101 6670**  
**Tel: 011 234 6621**  
**Fax: 086 684 0547**  
**Unit 606, 1410 Eglin Office Park, 14 Eglin Road, Sunninghill**  
**PO Box 148, Sunninghill, 2157**  
**<http://www.savannahsa.com/>**

