SIRIUS SOLAR ENERGY FACILITY
PROJECT
UPINGTON, NORTHERN CAPE

SCOPING PHASE
PUBLIC MEETING

NOTES OF PUBLIC MEETING
HELD ON
TUESDAY 16 APRIL 2013

VENUE
PROTEA HOTEL
UPINGTON

Notes for the Record prepared by:
Savannah Environmental
Please address any comments to Gabriele Wood at the above address.
PUBLIC MEETING:
SIRIUS SOLAR ENERGY FACILITY PROJECT

Venue: Protea Hotel, Upington
Date: Tuesday 16 April 2013
Time: 16h00

WELCOME AND INTRODUCTION

Mr Shawn Johnston of Sustainable Futures ZA welcomed all present and introduced himself as the facilitator of the meeting. He noted that APS Invest One (Aurora Power Solutions) are proposing to the establishment of two 75MW photovoltaic (PV) solar energy facilities on a site approximately 20 km south-west of Upington in the Northern Cape Province. He said that Savannah Environmental (Pty) Ltd has been appointed as the independent environmental consultancy to undertake the combined Environmental Impact Assessment (EIA) for the project.

Mr Johnston thanked the members of the meeting for the opportunity to brief them about the proposed project. He noted that the purpose of the meeting was to present the background information on the project and also the findings of the Scoping Phase of the EIA. He said that Interested and Affected Parties (I&APs) would be provided with the opportunity to seek clarity on the proposed project and that all comments made would be recorded and submitted to the Department of Environmental Affairs (DEA) as part of the Final Scoping Report.

Mr Johnston requested the members of the meeting to introduce themselves (refer to the attendance register below).

MEETING ATTENDEES

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation &amp; Position</th>
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<tbody>
<tr>
<td>Ravisha Ajodhapersadha (RA)</td>
<td>Savannah Environmental – Environmental Consultant</td>
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<tr>
<td>H.P. van Heerden (HP)</td>
<td>Savannah Environmental – Environmental Control Officer</td>
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<tr>
<td>Shawn Johnston (SJ)</td>
<td>Sustainable Futures ZA – Process Facilitator</td>
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<tr>
<td>Oliver Johnson (OJ)</td>
<td>Aurora Power Solutions - Developer</td>
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<tr>
<td>A.N. Kühn (AK)</td>
<td>Farmers Association (Chairperson) and Steynsvoer Irrigation Council.</td>
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<tr>
<td>M.W.J. Kühn (MK)</td>
<td>Farmer Association (Manager) and Landowner</td>
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<tr>
<td>S. Louw (SL)</td>
<td>Landowner – Farm Tungsten Lodge</td>
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</table>
Steven Burnett (SB) presented the Siruis project and the background and introduction to the project. Ms Ravisha Ajodhapersadh presented an overview of the project and potential environmental impacts of the project identified in the draft Scoping Report. (Please refer to the attached presentations).

**DISCUSSION SESSION**

<table>
<thead>
<tr>
<th>Question / Comment</th>
<th>Response</th>
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<tbody>
<tr>
<td><strong>AK</strong>: The Farmers’ Association would like to meet with the developers so that the surrounding farmers can be informed of the project.</td>
<td><strong>SJ</strong>: A date for this meeting will be arranged by Savannah Environmental.</td>
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<tr>
<td><strong>AK</strong>: How many local jobs will be created? What skills will be required for these jobs? Will permanent or part-time jobs be created?</td>
<td><strong>OJ</strong>: There are numerous solar energy facilities planned for the area. People will be trained to work on the projects during the construction and operational phases. The details regarding the number and types of jobs to be created still need to be identified and planned for. The EIA phase report will provide an indication on the number of jobs that can be created by the project.</td>
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<td><strong>AK</strong>: Approximate job creation figures must be presented to the Farmers’ Association. Farmers would need an understanding of how the influx of people would impact on their safety. Issues pertaining to safety and security, theft, fire-fighting and access control would need to be addressed.</td>
<td><strong>SJ</strong>: A date for this meeting will be arranged by Savannah Environmental.</td>
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**WAY FORWARD AND CLOSURE**

In closing Mr Johnston noted that the project was currently in the public review period of the Scoping Phase which would close on 30 April 2013. He stated that the comments received would be responded to and added to the Final Scoping Report that would be submitted to DEA. Mr Johnston thanked everyone for availing themselves for the meeting and for the inputs which were provided.
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<tr>
<th>#</th>
<th>Organisation</th>
<th>Name &amp; Postal Address</th>
<th>Contact Details</th>
<th>Signature</th>
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<tbody>
<tr>
<td>1</td>
<td>SF2A</td>
<td>Shawn Johnston, P.O. Box 747</td>
<td>Tel: 0833259965</td>
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<td>Rondebosch 7700</td>
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<td>2</td>
<td>Keimoes</td>
<td>Paul WINTERBOER, P.O. Box 512</td>
<td>Tel: 076 834 5405</td>
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<td>3</td>
<td>Aurora Power Solutions</td>
<td>Oliver JOHANSEN</td>
<td>Tel: 012 16 02 233</td>
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<td>A. N. Kühn (Bokke)</td>
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<td>W. J. Kühn</td>
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<td>Savannah Environmental</td>
<td>Ravisha Aydavperril</td>
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<td>Steven Burnett</td>
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Kai Garib Municipality
Solar PV Project Development

April 2013
Agenda

• About Us
• Overview of Projects
• Padrooi Solar Project
• Sirius Solar Project
• Aries II Solar Project
• Project Schedule
• Benefits to the Municipality
  – Employment
  – Economic Development (Enterprise Development & Socio Economic Development)
• Requirements from DoE
About Aurora (APS)

• APS is a South African renewable energy project development company focussed on solar projects

• APS is currently focused on development of several REIPP projects in various regions of the country

• APS is using this experience in developing rooftop solar projects

• We are committed to building sustainable infrastructure that will contribute to local economic development, create jobs and provide education.
About APS

Our Experience

Solar

- Received preferred bidder status on two 10MW solar projects in the Northern Cape
- Solar Plant development in **Spain** and **California** with Solfocus (1-10MW)
- Currently working on commercial rooftop systems
- Development of several 15-75MW projects for the IPP procurement programme
Approved Projects

• 2 Solar Projects submitted jointly by BTE and APS have reached financial close under the IPP Procurement Programme:
  – Konkoonsies Solar Project (Poffadder) - 10MW PV plant
  – Aries Solar Project (Kenhardt) - 10MW PV plant

• Both projects have started construction this month and will be completed by the end of the year
Current Projects

– Padrooi I&II, Augrabies
– Aries II, Kenhardt
– Konkoonsies II, Pofadder
– Sirius I & II, Upington
– Adams I&II, Hotazel
– Betelgeuse, Victoria West
Sirius I&II

- Project name - **Sirius One Solar Project & Sirius Two Solar Project**
- Site located 20km from Keimoes and Upington
- EIA initiated – draft scoping report released April 2013
- Development for two **75MW** plants on a total **500ha site**
- Site located next to new **Olyvenhoutsdrif Substation**
- 1\textsuperscript{st} project to be submitted into the 4\textsuperscript{th} procurement round in August 2014
Photovoltaic Technology

- Solar photovoltaic technology creates electrical energy directly from the sun
- No moving parts required. Energy conversion in the panels – Panels made of crystalline silicon
- Relatively small amounts of water
- Quick to construct
A local hotspot of development

• Excellent solar radiation
• Low level of population density, minimal impact
• Readily accessible land
• National grid infrastructure access
• Development projects are welcomed by all, win win scenario for all parties.
Employment

- A 10 MW PV plant creates up to an **average of 120 jobs** during the construction phase and on **average 15 permanent jobs** during the operation and maintenance phase in the following categories:

<table>
<thead>
<tr>
<th>Construction</th>
<th>Unskilled workers</th>
<th>Highly Skilled Positions</th>
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<tbody>
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<td>Mechanical</td>
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<td>Civil</td>
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<thead>
<tr>
<th>Operation and Maintenance</th>
<th>Plant Monitoring</th>
<th>Plant Security</th>
<th>Plant Maintenance</th>
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<td>Electrical</td>
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<td>Mechanical</td>
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The request for proposals (RFP) documents specify certain criteria which have to be met by the project company in terms of local economic development – to be updated end April 2013.

Of these criteria there are several targeted at local communities – local communities are defined as communities within 50km of the project site.

The Department of Energy has set minimum thresholds which must be met by the project company for the project to qualify for licensing. These thresholds are set out in an Economic Development Scorecard.
Economic Development

- Outputs and minimum thresholds of the Economic Development Policy the RE Projects under the IPP Procurement Programme are:
  - Job creation - 12% from local community
  - Ownership - 2.5% from local community (previous projects 5%)
  - Socio economic development - 1% of project revenue (previous projects 1.25%)
  - Education and skills development
  - Enterprise development – (previous projects 0.6% of project revenue)
  - Fostering rural development and involving communities
  - Participation of HDI and marginalised regions
The DoE requires the criteria set out below as a minimum to be satisfied before a project can be qualified.

The banks also need to see that these requirements are satisfied before they can commit to funding a project.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Status</th>
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<tbody>
<tr>
<td>Environmental Impact Assessment</td>
<td>Approved</td>
</tr>
<tr>
<td>Land Use Consents</td>
<td>Council Approval Required</td>
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<tr>
<td>Heritage Consent</td>
<td>Received</td>
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<tr>
<td>Water Requirements</td>
<td>Allocated (Final agreement required)</td>
</tr>
<tr>
<td>Civil Aviation Consent</td>
<td>Received</td>
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</table>
Industry Association

APS was one of the 8 founding companies of SAPVIA

Chris Haw of APS was the founding chairman of the association

SAPVIA consists of over 96 paying member companies (both local and international) in South Africa’s photovoltaic market

The association collects and transfers information between members and target audiences such as public or government institutions.
Contact Details

Aurora Power Solutions
www.apsolutions.co.za

- Tel: +27 21 421 9764
- Fax: +27 (0) 865 138 648
- 2D Nautica Building, Waterclub Complex, 100 Beach Road, Granger Bay, Cape Town
PROPOSED SIRIUS SOLAR PV PROJECTS NEAR UPINGTON, NORTHERN CAPE PROVINCE

PHASE 1 & PHASE 2
SCOPING PHASE OF THE EIA PROCESS
PUBLIC MEETING
04 APRIL 2013

MEETING AGENDA

- Welcome and introduction
- Project team
- Project Information
- Summary of Findings of the Draft Scoping Report
- Way forward
- Discussion session
CONDUCT OF THE MEETING

- Work through the facilitator
- Language of choice
- Questions to be taken during the Discussion Session
- Identify yourself
- Equal participation
- Cellphone etiquette

INTRODUCTION

- DoE – IPP Procurement Programme
- Applicant – APS Invest One (Aurora Power Solutions)
- Proposing a commercial photovoltaic solar energy facility = 150 MW in capacity
- The project is known as the Sirius PV Solar project
- Each phase will have an electricity generation capacity of up to 75MW and are referred to as follows:
  - Sirius One Solar PV Project, Northern Cape Province
  - Sirius Two Solar PV Project, Northern Cape
- APS Invest One Require Environmental Authorisation from National DEA in terms of NEMA:
  - Overarching environmental legislation in South Africa
  - Specifies the EIA process
  - Independent environmental studies in accordance with the EIA Regulations of June 2011
WHAT IS A PHOTOVOLTAIC (PV) FACILITY?

75 MW PV PLANT x 2
Extent & Location
- 20km south-west
- Remaining extent of Farm Tungsten Lodge 638 (~1913 ha in extent)

Activity & Associated Infrastructure
- Photovoltaic panels - 150MW requires roughly 500 hectares
- Underground cabling
- Inverters
- Internal access roads
- Upgrade of the Hertzogville 132/22kV substation which is located on the site; and
- Workshop area for maintenance, storage, and offices.

Timelines –
- Construction - 18-24 months
- Operational phase of >20 years
EIA PROCESS & PUBLIC INVOLVEMENT

PHASE 1
Notification of EIA Process
1. Application form - DEA
2. Advertise - local papers
3. Site notices
4. Written notification - I&APs

PHASE 2
Environmental Scoping Phase
1. Consultation - Stakeholders & I&APs
2. Flyers & BID's
3. Focus Group Meetings
4. Public meeting
5. Public Review - Draft Scoping Report

PHASE 3
Environmental Impact Assessment Phase
1. On-going consultation
2. Public feedback meetings
3. Public Review - draft EIA Report & EMP

PHASE 4
Decision Making
1. Authority Review - Final EIA Report
2. Inform I&APs of decision
3. Appeals Process

APPROACH TO SCOPING

- Identification of issues
- Sensitive areas/features identified through desk-top specialist studies (e.g. ecological, visual, heritage) & consultation
- Prepare a Plan of Study for EIA
- Design of facility to be informed by sensitive areas identified through the EIA process
SCOPING REPORT - DETERMINE SITE CHARACTERISTICS & POTENTIAL IMPACTS

- **Biophysical**
  - Drainage Lines
  - Protected Trees/ plant species
  - Soils & erosion prone areas

- **Economic**
  - Job Creation
  - Input into local economy

- **Social**
  - Community benefits
  - Nuisances during construction (dust, noise)
CONCLUSIONS & RECOMMENDATIONS

• No fatal flaws were identified
• Power Line required & infrastructure layout be assessed & presented in the draft EIA report
• Plan of Study for EIA Phase (specialist studies, assessment & draft EMP) included in Scoping Report for DEA approval
• Draft Environmental Management Programmes will be developed in EIA phase
• Associated infrastructure (access roads, power lines etc.) to be assessed in EIA phase

WAY FORWARD

• Public Review period for Draft Scoping Report - 03 April 2013 - 06 May 2013
• Report available at
  • Upington Public Library
  • www.savannahsa.com
• Final Scoping Report to be submitted to DEA for review & acceptance - May 2013
• Undertake detailed specialist studies & further public consultation - July 2013 - September 2013
• Draft EIA Report & Further consultation and meetings - September 2013 - October 2013
• Decision - end of 2013 / January 2014
WHO TO CONTACT

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