ILANGA CSP 1/KAROSHOEK SOLAR ONE
100 MW CSP, KAROS, UPINGTON

//KHARA HAIS MUNICIPALITY
NORTHERN CAPE

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NERSA PUBLIC HEARINGS FOR RENEWABLE ENERGY LICENCE APPLICATIONS
KIMBERLY, SOUTH AFRICA
Presentation Outline

1. Background & Project Site
2. Project Company Structure – Karoshoek Solar One
3. Merits of the Project
4. Project Timelines
5. Indicative key indicators
6. Contact Details
Ilangalethu Solar Power is a project development company which was set up by Emvelo to develop a 100 MW (Net) Concentrating Solar Power Plant with storage (“Ilanga CSP 1 / Karoshoek Solar One”) in line with the specifications of the Renewable Energy IPP Procurement Programme (REIPPP).

The Shareholders of the Karoshoek Solar One Project Company are:

- Emvelo (Lead Developer/ Project Manager/ BEE partner);
- Industrial Development Corporation (IDC);
- ACS Cobra Energia (EPC and O&M Contractor);
- Public Investment Corporation (PIC);
- Investec and
- The Karoshoek Community Trust
4 Commercial lenders (Nedbank, ABSA, Investec and 2 DFIs (IDC and DBSA) are the MLAs.

- Nedbank
- ABSA
- Investec
- DBSA
- IDC
- Standard Bank

Karoshoek Solar One (Pty.) Ltd.

EPC
ACS COBRA

O&M
ACS COBRA

Debt

15% 20% 20% 20% 15% 10%

Emvelo  IDC  COBRA  PIC  Community  Investec

Equity

Power Sales

REIPPP

“Karoshoek Solar One 100 MW CSP Power Station”
Karoshoek Solar Valley Park:
- Excellent DNI 2,800
- Easy access from the N10 highway
- 25 km from Upington

Transmission Infrastructure:
- Karoshoek Site is located in the middle of the 400kV infrastructure network currently under development
- The 400kV Solar Park Sub will tie into the 132kV Gordonia Sub in Q2 of 2016.
- The Eskom scope to connect the project to west has not changed
- The green dotted lines shows the 400kV infrastructure planned for the area from Q1 2016

Water Supply:
- The Department of Water Affairs has confirmed that there is water available for the Ilanga (Orange River).
- The Ilanga plant will have a lower water footprint as it will utilise dry cooling technology
Karoshoek Solar One – Merits of the project

The Project has a number of favorable elements, including the following:

- A reputable EPC partner with a credible record in CSP and a long-term interest in the Operations and Maintenance (O&M)
- An EPC partner that will provide a turn-key CSP solution
- Proven technology that has been deployed in over 20 CSP plants globally
- Solid local partners in the IDC, Emvelo, PIC and Investec.
- IDC has been involved in the co-development of all the CSP projects in Rounds 1 and 2 bidding rounds.
- The PIC has taken equity in a Round 2 CSP project.
Karoshoek Solar One – Project Timelines

<table>
<thead>
<tr>
<th>Activity</th>
<th>2012/13</th>
<th>2013/14</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Oct Nov Dec Jan</td>
<td>Jul Aug Sep Oct</td>
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<tr>
<td>Development</td>
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<tr>
<td>Bid preparation</td>
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<tr>
<td>Debt/Equity raising</td>
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<tr>
<td>Bid submission</td>
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<td>19/08/13</td>
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<td>Preferred bidder</td>
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<tr>
<td>announcement</td>
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<tr>
<td>Financial close</td>
<td></td>
<td>01/06/2014</td>
</tr>
<tr>
<td>Plant erection</td>
<td></td>
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- 19 August 2013 – Bid Submission
- 29 October 2013 - Preferred Bidder Award
- 31 July 2014 – Financial Close
- 1 October 2014 – Notice to Proceed
- 31 March 2017 – Commercial Operation Date
- 31 March 2037 – End of 20 year PPA
- 1 April 2037 Project will look for a new PPA as the CSP plant would still have a life of 15 to 20 years.
Karoshoek Solar One – Social & Economic Indicators
The site is easily accessible via the N10. There is a number of townships (formal & informal) located along the N10 and these will provide the labour required during construction and post-construction phases. The surrounding townships (small white circles) will be the beneficiaries of the Karoshoek Community Trust.
Karoshoek Solar One – Community Programmes

KAROSHOEK SDI PROGRAMMES

PROGRAMME 1 SOCIAL
PROGRAMME 2 EDUCATION
PROGRAMME 5 TOURISM
PROGRAMME 6 MANUFACTURING
PROGRAMME 3 ENERGY
PROGRAMME 7 AGRICULTURE
PROGRAMME 4 INFRASTRUCTURE
PROGRAMME 8 ENVIRONMENT

Short to medium term focus programmes for SED contributions
## Karoshoek Solar One – Social & Economic Indicators

<table>
<thead>
<tr>
<th>Element</th>
<th>Key Highlights of our commitments</th>
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</table>
| **Job creation**              | • 30.95 Jobs Per MW  
• 41,789 person months during the Construction and Operations period  
• Estimated 1,000 Construction Jobs  
• 60 -80 Operational Jobs                                                          |
| **Local content**             | • 49.73%                                                                                           |
| **Ownership**                 | • 30% Black Ownership in Karoshoek Consortium  
• 20% Black Ownership in Contractor responsible for Construction and Operations  
• 15% Ownership by the Karoshoek Community Trust                                      |
| **Management Control**        | • 55.14% Management Control across the Construction and Operations period                          |
| **Preferential Procurement**  | • Total Spend with B-BBEE - 104.27%  
• Total Spend with QSE and EME - 3.52%  
• Total Spend with Women Owned vendors - 0.84%                                           |
| **Socio-Economic Development**| • Commitment of 1.0% of revenue  
• Half a billion Rands annual contribution for 20 year period  
• Beneficiaries defined within a 50km radius                                              |
Karoshoek Solar One – Example of Social Upliftment Initiative

✓ Leerkrams Township – Existing Park and Play Area
Karoshoek Solar One – Example of Social Upliftment Initiative

✓ Leerkras Township – Example of a typical Community Upliftment project
Contact Details

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