Agenda

- Summary of Limpopo Solar Projects
- Overview of Soutpan Solar Park
- Economic Development Benefits
- Meet the stakeholders
- Introduction to Solar PV Technology
Why South Africa for Solar PV?

Electricity demand:  
Growing

Renewables potential:  
Untapped

South Africa needs **52GW of new generation capacity** in the next **20 years**.

South Africa’s **natural resources** include some of the **world’s best insolation and sites** for solar power.

Economic opportunity:  
Significant

Developing a **critical mass of renewables** would deliver **major economic and industrial benefits**.
Project Summary
**LIMPOPO SOLAR PV PROJECTS – AT A GLANCE**

<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>SOUTH PAN SOLAR PARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>Erika Energy (Pty) Ltd</td>
</tr>
<tr>
<td>Plant Capacity</td>
<td>28 MW (AC)</td>
</tr>
<tr>
<td>Farm</td>
<td>Zuurbult 450 MS</td>
</tr>
<tr>
<td>Portions</td>
<td>8 (Remaining extent), 9</td>
</tr>
<tr>
<td>Local Municipality</td>
<td>Blouberg</td>
</tr>
<tr>
<td>District Municipality</td>
<td>Capricorn</td>
</tr>
<tr>
<td>GPS coordinates</td>
<td>22° 59.5’ S , 29° 15.1’ E</td>
</tr>
<tr>
<td>Site size (ha)</td>
<td>89</td>
</tr>
<tr>
<td>Distance from Joburg</td>
<td>~400 KM</td>
</tr>
<tr>
<td>Start of Construction</td>
<td>Dec 2012</td>
</tr>
<tr>
<td>Total Capital Investment</td>
<td>ZAR 1400 MN</td>
</tr>
<tr>
<td>Life of the plant</td>
<td>20 years</td>
</tr>
</tbody>
</table>
Project Summary

- 28MW Solar Photovoltaic Power Plant
- Above 50 000 000 KWHs planned to deliver to grid in first year of operation.
- Located in Limpopo, +- 400 Kms from Kimberly
- Bid for 4th November : 1st IPP Bid Phas, won preferred bidder
- Estimated Financial Close: June 2012
- Estimated Construction Start: August 2012
- Estimated Operations Start: September 2013
- Approximate cost of facility : ZAR 1400 MMs
The site is located on **Farm Zuurbult**, (189 hectares in extent), Local Municipality, Blouberg District Municipality, Limpopo province. Geographical coordinates: 22° 59.5’ S, 29° 15.1’ E
Grid Connection

- **Technical**
  - Soutpan: 132kV interconnection point to existing substation (Soutpan substation), Distance from project to SS < 150m.
  - After commissioning of the SS and transmission lines, assets and servitude will be transferred to Eskom for continued O&M

- **Interaction with Eskom**
  - Applied for self build interconnection option
  - Two meetings with Eskom held at project site to discuss design aspects of interconnection.
  - Submitted deposit for Eskom detailed budget quote, Expected to receive by 28 April 2012.
Economic Development Benefits from the Limpopo Projects
Socioeconomic Development (SED)

- SED activities promote the inclusion of Black people into the formal economy and forms the basis of all other Economic Development criteria.
- SED can be achieved through the following means:

  - Annually, the project company will spend 2.1% of its revenues on SED, for the life of the plant, from commencement of Operations.
## Socio Economic Development Summary - Soutpan

### Community Benefit

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs Created</td>
<td>250</td>
</tr>
<tr>
<td>Local Content procured</td>
<td>42%</td>
</tr>
<tr>
<td>South African Ownership</td>
<td>49%</td>
</tr>
<tr>
<td>Community Project Ownership</td>
<td>10%</td>
</tr>
<tr>
<td>Management</td>
<td>50% Black, 25% Black Female</td>
</tr>
<tr>
<td>BEE Procurement:</td>
<td>ZAR 331 M</td>
</tr>
<tr>
<td>Socio-Economic Spend</td>
<td>Above ZAR 80 MM</td>
</tr>
<tr>
<td>Enterprise Development Spend</td>
<td>Above ZAR 30 MM</td>
</tr>
<tr>
<td>Skills Developed</td>
<td>Engineering, Construction, Management, Entrepreneurship, Technology Development, Plant Maintenance, Security</td>
</tr>
</tbody>
</table>
Meet the Stakeholders
<table>
<thead>
<tr>
<th><strong>STAKE HOLDERS IN THE TWO PROJECTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOUTPAN</strong></td>
</tr>
<tr>
<td>Holding Company Shareholders</td>
</tr>
<tr>
<td>BEE Partner</td>
</tr>
<tr>
<td>Community Trust</td>
</tr>
<tr>
<td>EPC JV Partner</td>
</tr>
<tr>
<td>O&amp;M JV Partner</td>
</tr>
<tr>
<td>Management Services Provider</td>
</tr>
<tr>
<td>Economic Development Solution Providers</td>
</tr>
</tbody>
</table>
Izingwe International Fund is a closely held investment vehicle, founded by Sipho Pityana, Ashley Ally and Mark Sifris.

Energy and Infrastructure form the core areas of Izingwe’s investments.

100% Black owned and controlled; Level 3 Broad based Black Economic Empowerment Rating.

VALUE ADD

Existing investment portfolio will provide Izingwe with unparalleled leverage in the manufacturing sector.

Closely held nature of the partnership and individual experiences (past) of the founder members will ensure a stable relationship with the project and community.
Some of Izingwe’s investments...

<table>
<thead>
<tr>
<th>Infrastructure and Power</th>
<th>Mining</th>
<th>Logistics and Motor</th>
<th>Financial Services</th>
<th>Other</th>
</tr>
</thead>
</table>
| **SCAW METALS GROUP**  
(beneficiary of steel – subsidiary of Anglo American) | **AngloGold Ashanti** | **Barloworld Leading brands** | **OLD MUTUAL** | **PETERS PAPERS** |
| **ABERDARE**  
(Africa’s largest producer of cables – subsidiary of Altron) | **Bushveld Platinum**  
(owns prospecting rights for iron ore and platinum) | **oneLogix**  
(listed distributor of vehicles and media) | **NEDBANK** | **IZINGWE**  
Property Managers |
| **Powertech**  
(provider of specialist implementation services to the telecoms and power industries – subsidiary of Altron) | **Maxitrade and MRX**  
(own sea concessions along the Western Cape) | **Prostart**  
(provider of automotive paints – subsidiary of Freeworld Coatings) | | |
| **NIC Instruments & Engineering**  
(provider of turnkey electrical solutions) | | | | |
Community Trust(s) - loveLife and Kurisani

Kurisani is the investing arm of loveLife, South Africa’s largest HIV prevention initiative for youth.
Separate Trusts have been established for the Community effort involved in each project – Kurisani Soutpan Trust and Kurisani Witkop Trust.
100% Black Youth owned.

VALUE ADD

- loveLife and Kurisani achieve success by empowering the youth. Partnering with them is equivalent to investing in South Africa’s future.
- Proven track record of delivering worthwhile, credible and monitor-able socioeconomic development and enterprise development projects.
The Landelahni Group is a strategic resourcing & development partner providing a range of specialized recruitment & talent development solutions at all levels of employment.

VALUE ADD

- Landelahni will offer a range of talent development services including: leadership development, coaching and mentoring.
SEDISA (Socio-Economic Development Initiative South Africa) is a leader in the development and implementation of sustainable Socio-Economic Development (SED).

SEDISA structures SED programmes to comply with programmes as per code 700 of The Codes of Good Practice for BBBEE.

**VALUE ADD**

- The SEDISA programmes are designed to create sustainable access to the economy for the beneficiaries.
- The SEDISA Program will manage the projects' graduate recruitment program through allocating bursaries to promising high school students.
Life Dynamics Training is the leading edge provider in the field of human technology, development and personal transformation.

VALUE ADD

- Life Dynamics Training courses are designed to bring about a fundamental shift in what is possible in peoples lives.
- Participants in Life Dynamics Training courses and programs see new possibilities for effective action in everyday matters. They are able to achieve higher standards of excellence and intimacy and to think and act beyond existing views and limits
For the past 18 years, Womens Development Bank (WDB) have been offering real hope to the women of South Africa to enable them to build a self sustaining future.

The core business of the WDB Group is ensuring that poor rural women are given the tools to free themselves from the chains of poverty.

VALUE ADD

- WDB will provide capacity building and fund raising and will innovate development projects that are aimed at improving the lives of poor rural women.
- The primary tool they have is developmental micro credit for the poorest.
BEESA GROUP BEESA Group manages the oldest and largest Enterprise Development Fund in the country.

With more than 5 years of proven track record and a Financial Services Board (FSB) registered Fund Management structure, BEESA will manage a dedicated fund facility for the Projects

VALUE ADD

- BEESA Groups process and documentation fulfills the requirements for Enterprise Development under the gazetted Codes of Good Practice on Board-Based BEE
- BEESA GROUP will provide the following services in relation to Enterprise Development:
  - Enterprise Development Fund Management
  - Enterprise Supplier Development Programme Management
  - Enterprise Development Monitoring and Reporting
CHINT/ ASK

- Astronergy Solar Korea (ASK) is a wholly owned subsidiary of CHINT Solar (Zheijiang)
- As of 2010, the CHINT Group grossed revenues of over USD 3 billion and declared assets worth USD 2 billion
- Astronergy is the world's first large scale producer of high efficiency thin film (TF) modules

VALUE ADD

- CHINT's vast expertise and global presence can help jump start local module manufacturing and assembly
- Ancillary units that will cater to CHINT manufacturing lines will provide widespread employment in the local community
**SunEdison**

*SunEdison develops, builds, finances, owns and operates solar power plants in order to deliver solar services / sell commercial retail electricity at competitive prices*

**One of the largest solar energy service providers in North America**
- Over 400 solar plants, financed and under O&M
- Operational plants in 6 countries and development in 10 other countries
- Built first utility scale plant in the U.S and Canada
- Tracking 4 GW in project development
- Fastest growing international solar companies
- Created a JV with First Reserve Corp to invest US $1.5 billion SunEdison projects
- Built Europe’s largest PV Power Plant of 70 MW in 2010 in 7 months

**Work closely with customers in order to:**
- Address renewable portfolio requirements
- Hedge cost of energy
- Provide green energy

**Core competencies and key advantages**
- Internal R&D to optimizes system design and production
- Leading monitoring technology maximizes uptime and production
- Financing capabilities enable project growth, +$1 Bil in projects done
MEMC/ SunEdison

- MEMC
- Currently, SunEdison has over 400 MW of Solar PV plants under management worldwide

**VALUE ADD**

- Experience of developing a wide variety of projects across the globe
- Vertical Integration provides control over all aspects of the Solar Energy value chain
- Excellent relations with the international investing community; IFC (of the World Bank) is looking to invest in SunEdison’s South Asian and African operations
- Prior success on the community development front
MEMC - Global Reach and Geographic Diversification

Manufacturing Facilities
- St. Peters, Missouri
- Sherman, Texas
- Pasadena, Texas
- Portland, Oregon
- Merano, Italy
- Novara, Italy
- Kuala Lumpur, Malaysia
- Ipoh, Malaysia
- Hsinchu, Taiwan
- Chonan, South Korea
- Novara, Italy
- Singapore

Sales & Support Offices
- St. Peters, Missouri
- Santa Clara, California
- Sherman, Texas
- Paris, France
- Novara, Italy
- Shanghai, China
- Hsinchu, Taiwan
- Seoul, South Korea
- Tokyo, Japan

SunEdison
- Toronto, Canada
- Prescott, Arizona
- Sacramento, California
- San Clemente, California
- San Francisco, California
- Denver, Colorado
- Beltsville, Maryland
- Pennsauken, New Jersey
- Portland, Oregon
- San Juan, Puerto Rico
- St. Thomas, Virgin Islands
- Chennai, India
- Seoul, South Korea
- Dubai, U.A.E
- Paris, France
- Lecce, Italy
- Milan, Italy
- Barcelona, Spain
- Madrid, Spain
Diverse Experience in Sizes and Geographies

- **69.8 MW - Rovigo, Italy**
  Crystalline panels, fixed tilt, ground mount.
  Largest solar plant in Europe

- **Kohl’s - 409 KW - Laguna Nigel, CA**
  Crystalline panels, fixed tilt, roof mount

- **8.2 MW - Alamosa, CO**
  Crystalline panels, Fixed, one-axis, & dual-axis trackers, ground mount

- **City of San Diego - 1.1 MW - San Diego, CA**
  Crystalline panels, fixed tilt, ground-mount on steel

- **9.0 MW - Ontario, Canada**
  Thin film panels, fixed tilt, ground mount

- **Duke Energy - 3.9 MW - Cotton Grove, NC**
  Crystalline panels, one axis, ground mount
SunEdison’s Rovigo Project

- SE built Europe’s largest Solar PV Power Plant at Rovigo, Italy – 70 MW Project Commissioned on 22nd Nov 2010
- System will power ~16,500 homes & prevent 40,000 tons of CO2, equivalent of 8000 cars on road

- Optimum Area Utilization – 206 Acres (3 Acres/MW)
- Guaranteed Record Completion Time (22nd March 10 – 22nd Nov 10)
SunEdison India’s Plants – India and Thailand

25 MW - India

1 MW (with tracker) - India

Thailand
Afterschool studies made possible

Permanent employment generated for members of the Local Community

Community hall setup to provide vocational training and extra curricular activities

SunEdison’s Community Development Effort – Meerwada Village in India (60 houses)

No need to walk 5 km to charge mobile phones
Thanks

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