

Renewable Energy Finance: Concentrated Solar Thermal

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Introduction

- Solafrica is a CSP development company funded by the principals of Lereko and Metier and the IDC.
 Marc Immerman and Michael Goldblatt are developers and shareholders.
- Lereko Metier Sustainable Capital Manager (or "LMSC") is targeting R250 million of investment committed for clean technology projects and businesses encompassing renewables, energy efficiency, waste and water management in Southern Africa.
- Expected returns >25% IRR.
- Development stage investment.
- The Metier Principals and teams have a seven-pool, twenty year track record in private equity transactions achieving 36% gross annual IRR's from R6.5b across 85 investment transactions.
 - Thierry Dalais, Anthony Hewat, Paul Botha
- LMSC will leverage the M&A and private equity skills of Metier and the environmental, empowerment and sustainability reputation of Lereko.
 - Valli Moosa, Popo Molefe, Lulu Gwagwa





LMSC Team

Michael Goldblatt

- BSc Medical Science, MSc Geography, MSc Economics (environmental & natural resources)
- Authored the World Bank SA CDM strategy , integral in SA REFIT and Designated National Authority establishment
- Relevant experience in water and waste consulting to government and municipalities
- CDM and RE experience with leading SA corporates
- Developer and shareholder in Solafrica

Marc Immerman

- B Comm and Masters (Finance)
- Investment banking, software and media executive experience
- Exposure to numerous cleantech projects and deals
- Developer and shareholder in Solafrica

Marius Hugo

- B.Eng (Elec), MBA.
- Engineering design on energy harvesting technologies including solar & vibration energy harvesters, electronic amplifiers, energy efficient micro valves and environmentally responsive smart clothing
- Relevant Private Equity experience includes MBO, LBO and infrastructure investment in water and waste sectors

Paul Jessiman

- B. Bus Sci, LLB, MFA
- 23 years PE experience including early stage and start-ups

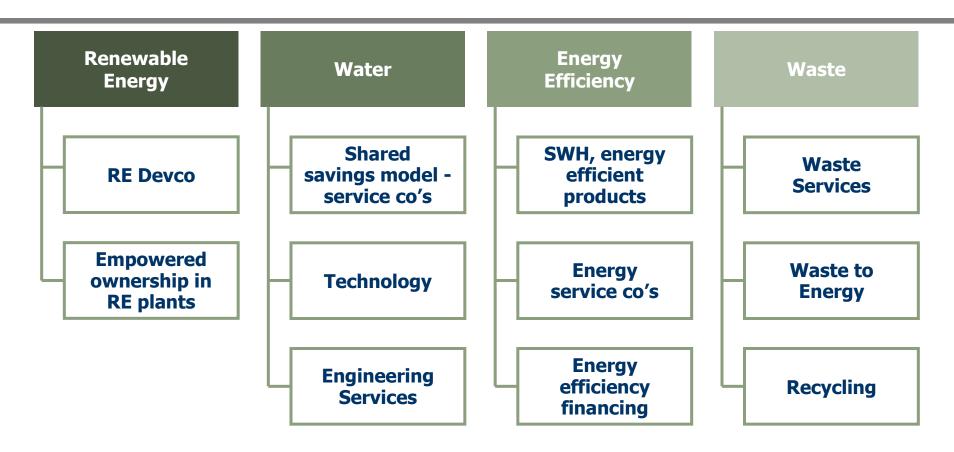
Joni Warburton

- CA(SA)
- 2 years Private Equity CFO financial experience





Investment Sectors targeted







Overview: Renewable Energy

Solar

CSP predictability and storage solutions to enable baseload power supply

PV sector competitive - Low barriers to entry

Government commitment to roll out SWH in medium term

Strategy: CSP Devco investment opportunity in short-term. SWH support & financing

Wind

Expected to play a part in SA's energy mix - Highly competitive

Lower technology risk but intermittent supply

Strategy: Devco investment with established experienced teams

Micro-Hydro

Low cost, low risk technology, limited resource in SA. Expected to reach grid parity in 3-4 years

Strategy: Identify experienced team with active projects. Devco and Opco opportunities

Biomass / Cogen

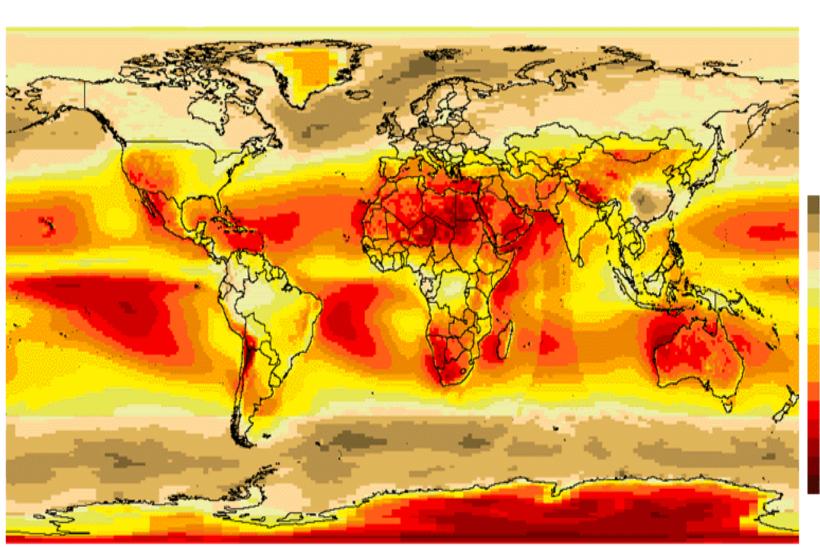
Imminent release of NERSA COFIT programme. Expected to reach grid parity in 3-4 years

Strategy: Devco investment with proven technologies & abundant fuel source





Why CSP in SA



Global

Direct Normal Irradiance

> Annual Mean

Less than 2.0 kWh/m sq per day

2.0 - 2.5 kWh/m sq per day

2.5 - 3.0 kWh/m sq per day

3.0 - 3.5 kWh/m sq per day

3.5 - 4.0 kWh/m sq per day

4.0 - 4.5 kWh/m sq per day

4.5 - 5.0 kWh/m sq per day

5.0 - 5.5 kWh/m sq per day

5.5 - 6.0 kWh/m sq per day

6.0 - 6.5 kWh/m sq per day

6.5 - 7.0 kWh/m sq per day

7.0 - 7.5 KWh/m sq per day

7.5 - 8.0 kWh/m sq per day

8.0 - 8.5 kWh/m sq per day

8.5 - 9.0 kWh/m sq per day

Greater than 9.0 kWh/m sq per day









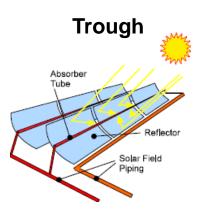
Technology: CSP







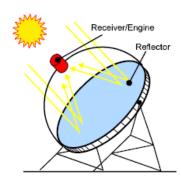




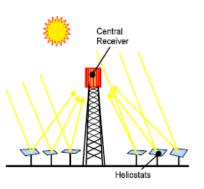




Dishes



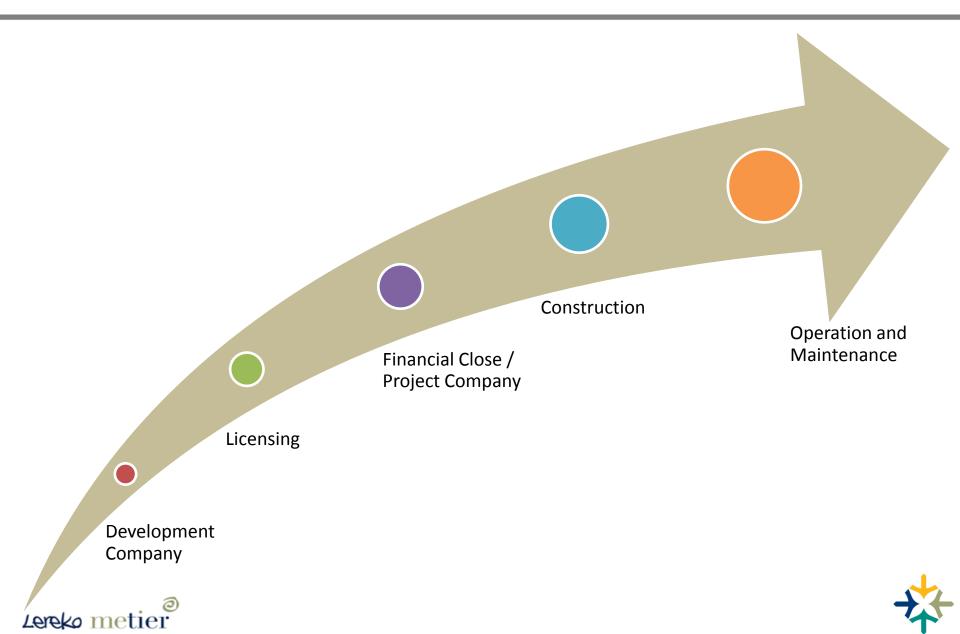
Tower







Lifecycle of CSP / RE Projects



Development Company Funding

Sources of Funding

- Private equity / Venture capital funds
- High net worth individuals
- Self-funded / Bootstrapped

Important Elements

- Team credentials and experience
- Resource strength
- Legality of site acquisition
- Grid capacity
- Ancillary requirements (water)
- Licensing and regulatory progress
- Team to have 'skin in the game'
- Credible financial model





Financial Close / Project Company Funding

Sources of Equity Funding

- Private equity / Infrastructure funds
- Pension funds
- DFI's

Sources of Debt Funding

- Local commercial banks
- International banks
- Concessionary finance is available

Important Elements

- PPA
- Regulatory approvals ~ EIA, WULA, Waste, CAA, Rezoning, Subdivision (70 of 1970)
- Legality of site acquisition
- Financial model & level of profitability
- Engineering study (BFS)
- Resource measurement
- Lenders DD
- O&M experience





CSP Specific Factors

Profitability

- Strength of resource (N.Cape)
- Dry vs. Wet Cooling
 - Water availability
- Size of plant
- Price paid for electricity
- Carbon

Debt

- Proven technology 12 months commercial operation
- Can expect 70/30 debt equity ratios
- Likely term of debt 10 yrs
- 12 months physical, validated on-site measurement
- Concessionary finance available IFC, DBSA & others

Equity

- Ownership required returns 15%-20%
- Preference to join at financial close and not bear development risk
- Infrastructure and PE funds



