

Department of Energy

SAIREC MEDIA ROUNDTABLE

Dr Wolsey Barnard

Acting Director General: Energy

4 October 2015



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SESSION THEMES

High-level Sessions

- SE4All: RE, a tool for economic Development and Poverty Alleviation
- Energy Transition with Renewables in Africa and Globally

Technology Innovation Sessions

- Wind (ongrid/hybrid)
- Solar (PV grid based/offgrid)
- CSP
- Geothermal
- Hydropower
- Biomass

Cross-cutting Sessions

- Africa Continental Interconnectivity
- Regulatory Frameworks
- Socio-economic Development
- Road to COP21
- Energy Access
- Finance Mechanisms
- Skills Development
- Renewables in support of Climate Adaptation
- Energy Smart Cities
- Transport and Eco-mobility
- Energy Storage
- High Temperature Applications
- Energy for Cooking



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SAIREC CONFERENCE

South Africa was awarded the hosting rights to SAIREC 2015 for a number of reasons:

- To create a more inclusive platform for African and other developing countries to showcase both their progress made to date and opportunities in RE space;
- Rapid development of RE market in South Africa;
- Global attention paid to the success of our competitive bidding process called the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) managed by IPP Office;
- To share IPP Office services and experience to the SADC Region and Africa to manage their RE bidding and procurement processes; and
- Identify/assist in the key challenges facing African countries in introducing renewable energy.



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SAIREC EXPECTED OUTCOMES

- South Africa is preparing to play a leading role globally in renewable energy deployment
 - Success of REIPPP Programme to be highlighted for possible replication and adoption by other countries
 - Localisation of components based on best of breed technologies will allow SA to become more competitive globally
 - Transparent and effective procurement process;
- Announcement of Southern Africa Centre for Renewable Energy and Energy Efficiency (SACREEE)



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SAIREC EXPECTED OUTCOMES (2)

- Local and international awareness regarding renewable energy and South Africa's policies pertaining to this
 - Launching of SA Investment Promotion publication will promote SA as green investment destination
 - Launching of REN21 Renewable Energy Status Report for the SADC Region will help raise awareness of the developments to date and potential that still exists in the SADC region
- Announcement of Small IPPs
- Facilitation of mutually beneficial interaction and information exchange between stakeholders in the renewable energy sector at an international level.
- Support business development in the sector



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SAIREC EXPECTED OUTCOMES (3)

- Foster collaboration between renewable energy research and development stakeholders having common goals
 - Launch of Solar Energy Technology Roadmap (SETRM) will promote collaboration locally and internationally and allow for focused development of a solar industry in SA
- Leveraging of collaborative projects, funding and sharing of resources
- Hosted African Investor Forum to create a platform for future dialogue to facilitate clean energy project development in Africa
- Skills transfer and development
- Adoption of a Conference Declaration



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SAIREC EXPECTED OUTCOMES (4)

- Building block to UN SE4All giving effect to:
 - ensuring universal access to modern energy services;
 - doubling the global rate of improvement in energy efficiency;
 - doubling the share of renewable energy in the global energy mix.
- Announcement of Southern Africa Centre for Renewable Energy and Energy Efficiency host country.
- Acknowledging the multiple benefits provided by renewable energy together with energy efficiency;
- Transparent and effective procurement process;
- Prioritising clean energy globally;



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SAIREC EXPECTED OUTCOMES (5)

- Securing financial resources;
- Research and Development;
- Regulatory Frameworks;
- Localising supply chains;
- Integrated planning;
- Regional trade and energy resource development;
- Clean Energy Corridor Initiatives;
- African Renewable Energy Initiative;
- Regional cooperation



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SAIREC EXPECTED OUTCOMES (6)

SAIREC Legacy Projects : Call for Nominations

- UN Women South Africa Multi Country Office, in partnership with Department of Energy and the United Nations Industrial development Organisation (UNIDO), is inviting submissions of renewable energy technologies and innovations;
- The RE project aims to promote technologies that have a positive impact on women's lives, especially those technologies that will improve the living conditions of rural and peri-urban women and their households;
- The successful nominees will be invited to participate in the exhibition as well as a policy dialogue with the subject: "Renewable Energy Technologies: Improving Women's Lives"; and
- Additional support will be provided to nominees to further develop their products for the purpose of sharing, incubating and scaling up.





Projects to be visited

Project Name	Project Type (Technology)	Project Area
1. Aurora-Rietvlei Solar Power	Solar PV	Aurora Rietvlei, Western Cape. About 190 km from City Centre. (Approximately 2h: 30min drive).
2. Wind Farm West Coast 1	Wind	Aurora, Western Cape 8km North of Vredenburg Western Cape.
3. Dassiefontein Wind Energy Facility	Wind	Caledon, Western Cape. Approximately 175 km via N2, on West coast direction. (About 1h: 40min drive)
4. Hopefield Wind Farm (Umoya Energy)	Wind	Hopefield, Western Cape. Approximately 150 km via N7 (about 1h: 30min drive).
5. Elgin Fruit Juices anaerobic digester	Anaerobic digester for the production of methane	Overberg district municipality 160 km via N2
6. SAB 3 000 m ² waste water treatment facility	Alternative waste water treatment facility	30 km via N1 (Joining N1 from R27) 9 La Belle St, Cape Town



Projects to be visited (cont.2)

Project Name	Project Type (Technology)	Project Area
7. City of Cape Town electricity department, PV installation	Parking lot mounted rooftop solar PV	24 km drive along the N1
8. Vrede en Lust wine farm PV installation	Ground mounted solar PV installation	Cape Winelands district municipality 175 km via N1
9. Gallows Hill (Cape Town traffic department) PV installation	Rooftop mounted solar PV	Cape Town - Gallows Hill 2 km Via Strand St and M61
10. Blackriver parkway PV installation	Solar PV rooftop installation	Less than 10 min drive out of the city centre
11. Atlantic Building (Park-a-lot building) PV installation	Solar PV rooftop installation	Walking distance from the CTICC



Projects to be visited (cont. 3)

Project Name	Project Type (Technology)	Project Area
12. Atlantic Building (Park-a-lot building) PV installation	Solar PV rooftop installation	Walking distance from the CTICC
13. Jinko Solar PV panel manufacturing facility	Solar PV panels	Epping Industria 2 Evans Ave, Epping Industria 1, Cape Town, 15 km via N2
14. MLT Invert manufacturing facility	Solar PV inverter manufacturer	Kenilworth, Cape Town 14 km via N2
15 SARETEC (South African Renewable Energy Technology Centre)	Training of solar PV, wind and biogas technicians	Belville, Cape Town 25 km via N2
16. SAREBI (South African Renewable Energy Business Incubator)	Support institution for SMMEs in the renewable energy manufacturing sector	Atlantis 50 km via N7



Thank You



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REIPPP Programme Successes

(up to June 2015)

WITH ONLY THE FIRST 37 IPPs CONNECTED TO THE GRID BY JUNE 2015, THE REIPPPP IS ALREADY CHANGING THE SOUTH AFRICAN ENERGY LANDSCAPE FOR THE BETTER



4 294

Gigawatthours

Power generated to date using renewable energy procured by the REIPPPP



4

Rand Billion

More in financial benefit for the country than its cost¹



1.2

million

Homes equivalent² powered by electricity generated from RE



19 050

job years³

Employment opportunities for South African citizens during construction and operation

Note 1. Calculated financial benefit (As a result of fuel savings when displacing coal and diesel powered alternatives and the economic benefit of avoiding unserved energy during severe shortfalls – what would have resulted in power cuts if RE was not available) minus tariff payments made to IPPs (not reflecting any socio economic or secondary industry benefits); Assessment concluded by Council of Scientific and Industrial Research (CSIR), published January 2015. Note 2. Annual consumption per household based on Eskom data for residential sector and amps reported number of electrified homes in South Africa. Note 3. Equivalent of a full time employment opportunity for one person for one year.



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The REIPPPP has attracted significant investment in BW 1, 2, 3, 3.5 & 4

Committed investments

Bid window 1, 2, 3, 3.5 & 4 (Rand billion)



192.6

Rand billion

Committed (total project costs¹) for IPP development in BW 1, 2, 3, 3.5 & 4

of which

R53.2 billion

from foreign investors and financiers

Technology share of investment

Total Project Costs (Rand billion)



R73.4 billion



38%

R62.4 billion



32%

R53.3 billion



28%

R1.0 billion



0.5%

R2.3 billion



1%

R0.3 billion



0.1%



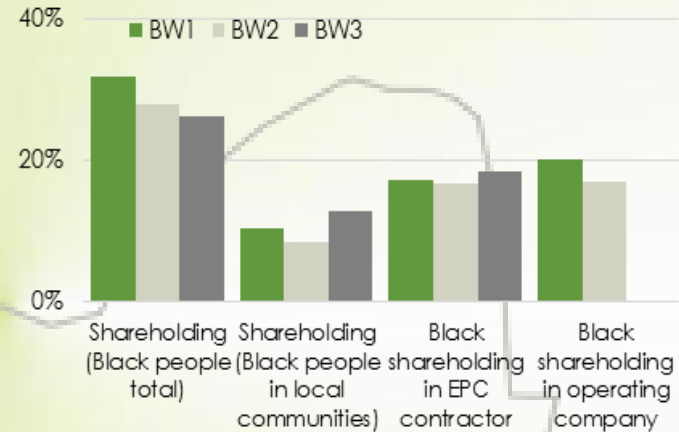
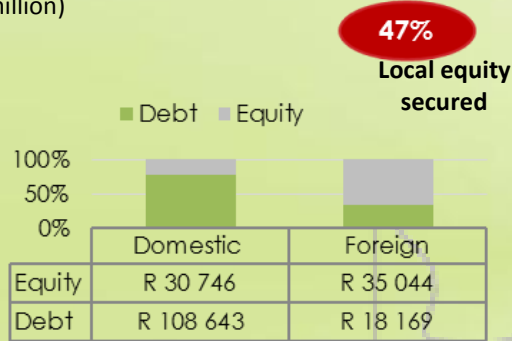
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South African Citizens Shareholding

Debt equity share of total project cost

(R million)



The South African (local) equity shareholding across BW1 to BW4 equates to 47% (R30.7 billion) of total equity (R65.8 billion), which is substantially more than the 40% requirement. Foreign equity amounts to R35 billion and contributes 53% of total equity.

The REIPPPP contributes to Broad Based Black Economic Empowerment and the creation of black industrialists. Black South Africans own, on average, 29% of projects that have reached financial close



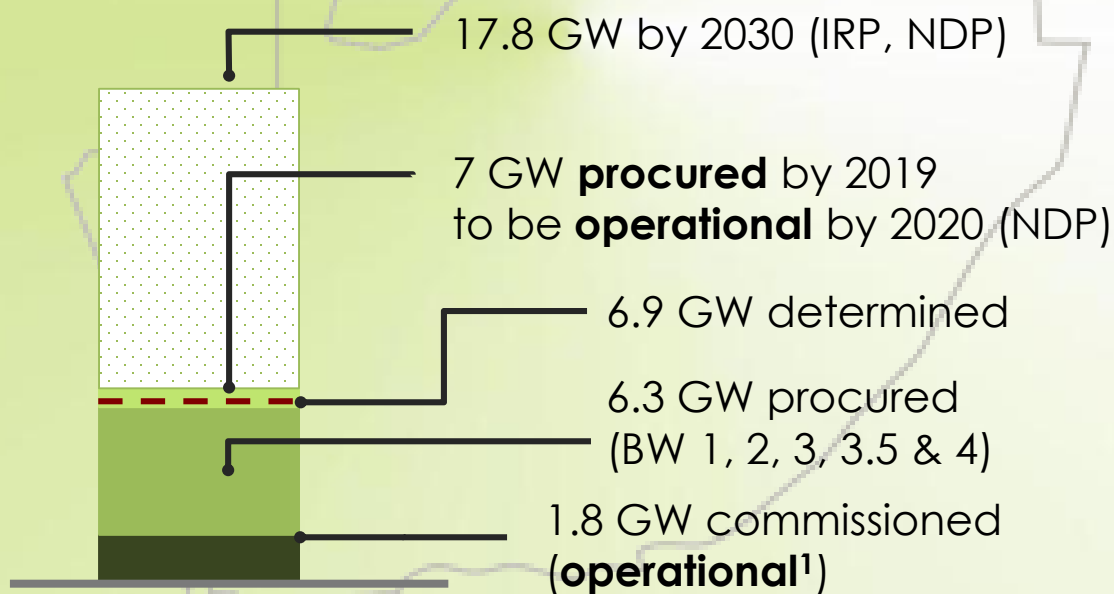
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Procured RE generation capacity

REIPPPP capacity procured

Capacity (GW)



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