



Economic Development & Tourism

Department:  
Economic Development & Tourism  
NORTHERN CAPE PROVINCE  
REPUBLIC OF SOUTH AFRICA



# The Green Document

2017/18  
IMPACT ASSESSMENT REPORT  
OF IPP ON THE NORTHERN CAPE  
COMMUNITIES

**Bernard Mabele** (Author)  
**Derek Martin** (Editor in Chief)

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Metlife Towers, Market Square  
Private Bag x6108, Kimberley 8300  
Tel: 053 839 4000/053 830 4808 Fax 053 830 4838  
E-Mail: [bmabele@ncpg.gov.za](mailto:bmabele@ncpg.gov.za)  
Website: [www.northern-cape.gov//dedat](http://www.northern-cape.gov//dedat)

# Acknowledgements



## **Bernard Mabele**

Manager: Renewable Energy

Department of Economic  
Development and Tourism

Tel: 053 830 4808

Cell: 082 219 0484

E-mail: [bmabele@ncpg.gov.za](mailto:bmabele@ncpg.gov.za)

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Finally, any errors or misrepresentation contained in the document are solely the responsibility of the author.

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# Foreword

by the MEC for Finance,  
Economic Development  
and Tourism



**Mr M Jack**

MEC for Finance,  
Economic Development  
and Tourism

The Northern Cape Province is essentially the gateway for investments in renewable energy specifically focusing on solar energy and to a small extent wind. To date, since the first bid window, we have attracted investment totalling R30.7 billion. This has created 20 063 jobs, supported socioeconomic development (SED) spend of R200 million, and supported small entrepreneurs.

Over and above these benefits, the most important aspect is the contribution to the national grid in the form of clean energy that these investments will bring. Carbon neutral energy generation that doesn't pollute like hydrocarbon-based coal and oil will have extensive benefits for the planet and thus future generations, this makes us very proud of the Northern Cape sun and wind.

However, improving our economic growth outlook over the period in advance remains our biggest challenge. If we are to overcome the triple challenge of inequality, poverty and unemployment in the Province, we should work harder to grow the economy and create more jobs through natural means such as wind and sun. Through the Nine-Point Plan we are investing in job creation projects to improve the country's jobs situation. We are also accelerating our infrastructure build programme to help bring more people into the country's job market.

To achieve our goals, it should be noted that the National Development Plan (NDP) has committed the country to create 11 million job opportunities and tripling the size of economy by 2030. Furthermore, the NDP encourages the Northern Cape Province to invest in a strong network of economic infrastructure designed to support the province's medium and long term economic and social objectives. With such enormous sun and wind, produced by the Northern Cape, it is without a doubt that Energy Infrastructure will continue to play an important role in the economics of the country.

However, government cannot do it alone. The message that we continue to spread as a Provincial Government, is that our people, who resides around the **mining belts and renewable energy corridors** should participate fully in the economic development of that area, as employees, shareholders or partners. We strongly believe that our communities should at-least benefit 50% of what is produced through procurement process or shareholding. Preparations are underway for a Renewable Energy Conference scheduled to take place in De Aar. The importance of the conference under the theme: ***"Driving the economic growth and transformation in the Northern Cape through renewable energy,"*** is to share information around the investment opportunities presented by the renewable energy sector.

I therefore invite all private sector investors to partner with the Northern Cape government and people, to explore opportunities for joint partnership and growth. There exist many opportunities in many different sectors in this vast land of ours that could be mutually beneficial to all of us. In closing, be reminded that the Northern Cape is a perfect tourist destination. We invite families and friends to take advantage of our special offers, discover and enjoy our unique tourism experiences, explore our off-the-beaten track towns, hidden gems and events for true Northern Cape flavour and warm hospitality.

I thank you

# Foreword

by the Acting HOD  
of the Department of  
Economic Development  
and Tourism



## **Mr S Mabilo**

Acting HOD: Department of  
Economic Development  
and Tourism

The Executive Council  
in the Province took a  
resolution in 2016 that the  
Department of Economic  
Development and Tourism  
should be tasked with the  
responsibilities of doing  
socio-economic impact  
assessment of IPPs on their  
beneficiary communities..

The focus of this report is on the community projects funded by the IPPs through their economic development obligations and recommendations by the Department in ensuring that there is constant institutional support.

As Rob Davies, Minister of Trade and Industry stated: "The next industrial, technological revolution is green industrialization; It is our goal as the Department to ensure that stimulated growth through industry development and trade investment in the renewable energy space are implemented. The Department will continue to work closely with IPPs to ensure that the majority of the people residing within the IPPs beneficiary communities have equal access to the opportunities existing within the renewable energy space.

I hope that readers of the Green Document all over the Province will feel enlightened and inspired to lead the Northern Cape Province into an era of renewable and sustainable energy supply.



# List of Acronyms

<b>AHOD</b>	Acting Head of Department
<b>APS</b>	Advanced Power System
<b>BBBEE</b>	Broad-Based Black Economic Empowerment
<b>CSP</b>	Concentrated Solar Panel
<b>DEDaT</b>	Department of Economic Development and Tourism
<b>DOE</b>	Department of Energy
<b>EDM</b>	Economic Development Manager
<b>ED</b>	Enterprise Development
<b>EMES</b>	Emerge Energy Services
<b>EDO</b>	Economic Development Obligations
<b>EPC</b>	Engineering Procurement Construction
<b>EPI</b>	Environmental Pulse Institute
<b>FAN</b>	Father-A-Nation
<b>FARR</b>	Foetal, Alcohol and Related Research
<b>IDP</b>	Integrated Development Programme
<b>IPP</b>	Independent Power Producers
<b>JPIF</b>	Joint Planning and Implementation Forum
<b>KSO</b>	Khi Solar One
<b>LED</b>	Local Economic Development
<b>MEC</b>	Member of the Executive Council
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MW</b>	Megawatts
<b>NDP</b>	National Development Plan
<b>NGO</b>	Non-Governmental Organization
<b>O&amp;M</b>	Operations & Maintenance
<b>PGDS</b>	Provincial Growth and Development Strategy
<b>PPA</b>	Power Purchase Agreement
<b>PV</b>	Photovoltaic
<b>QSE</b>	Qualifying Small Enterprise
<b>REIPPP</b>	Renewable Energy Independent Power Producers Procurement Programme
<b>SED&amp;ED</b>	Socio-Economic Development & Enterprise Development
<b>SMMEs</b>	Small, Micro and Medium Enterprise
<b>UNEP</b>	United Nations Environmental Programme
<b>WOV</b>	Women of vision

# Executive Summary

## OVERVIEW

The Northern Cape occupies a central position in the global debate regarding the renewable energy contribution in South Africa. The Province is regarded as HOME to sustainable private investment in Renewable Energy and to date the Northern Cape is host to 59 of the Country's 112 Independent Power Producers with more than 23 projects already connected to the grid at a capacity of over 1500 MW. The Northern Cape has the potential to generate energy by means of Concentrated Solar Panels (CSP), Photovoltaic (PV) and Offshore Wind. An area of particular confusion for many bidders has been the economic development requirement accounting for a total of 20% of the net value of the Renewable Energy's Independent Power

Because the wind blows during stormy conditions when the sun does not shine and the sun often shines on calm days with little wind, combining wind and solar can go a long way toward meeting demand, especially when geothermal provides a steady base and hydroelectric can be called on to fill in the gaps.

**MARK Z JACOBSON & MARK A. DELUCCHI,**  
Scientific American, November 2009

Producers Procurement Programme (REIPPP) proposals. The IPP is required to assess the needs of communities within a 50-km radius of their respective sites and prepare strategies on how to address the needs of the communities. What has been difficult for the IPPs is that the Department of Energy (DOE) has provided no guidance on how to prepare acceptable plans and how to demonstrate potential benefits. These IPPs had to go on the ground to assess the needs of the community. During the survey, IPPs indicated their willingness to work with the Municipalities in addressing the needs of the communities. Given the circumstances on the ground, one was able to learn more about the success stories as well as challenges:

## KEY SUCCESS STORIES AND CHALLENGES

### KEY SUCCESS STORIES

The good news is that these IPPs have Economic Development Obligations (EDO) whereby 2% of the revenue from the IPP is channelled towards the Socio-Economic Development initiatives of the beneficiary communities. The beneficiary communities are those communities located within a radius of 50-km from the IPP's sites of operations. During the site visits to the IPPs, it was discovered that the majority of the EDO fund goes to the Socio-Economic Development (SED) and followed by the Enterprise Development Projects. The IPPs gave evidence on their SED projects as well as their long-term vision and it is imperative to indicate that Bokpoort CSP has been an excellent project to address the Local Economic

Studies show that investments to spur renewable energy and boost energy efficiency generate far more jobs than oil and coal.

**JEFF GOODELL,** "Mitt Romney's Disastrous Energy Plan", Rolling Stone, Sep. 12, 2012

Development (LED) challenges within its area of operation. One is proud to mention that Bokpoort CSP has received an award for the African Community Project of the year in the 2014/15 financial year at the Africa Utility Week Industry Awards Ceremony. It has excelled in all aspects targeted for this category, namely: Impact on skills development, contribution to the community from the onset of construction and this really set a new standard for the IPPs.

## KEY CHALLENGES

These IPPs are faced with challenges of the community members who want to abuse the opportunities for individual gains. IPPs are also not fully addressing **Localization** due to fewer number of Maths and Science Students in the IPPs areas of jurisdiction. The reluctance of the Municipalities to participate in the IPPs **SED roll-out plans** – and a serious concern was raised that the Municipalities are not taking advantage of these developments within their Municipal Jurisdiction whereas in some other areas the Municipalities are taking part in the SED roll-out plans





# CHAPTER one

## Introduction



The Renewable Energy Independent Power Producers Procurement Programme is not exclusively about power but rather the development of communities, improvement of social wellbeing and a prospect of a better life for the communities within which the IPPs have been entrusted with an opportunity to operate. The Department of Economic Development and Tourism, being the implementing agent of economic development has embarked on a tour to assess the impact that these IPPs have on Northern Cape Communities. It is in light of the above abstract that the Department of Economic Development and Tourism seeks to better understand the impact and conditions that influence sustainability of these projects by taking stock of the current and future socio-economic benefits that will accrue to communities.

### 1.1. OBJECTIVE.

The underlying objective of the survey was to gauge the impact of these projects on local living conditions and their sustainability post implementation.

### 1.2. ASSESSED IPPS

The assessed projects are as follows, namely:

Project	Technology	District	Local Municipality	AREA	MW	Project status
<b>Khobab and Loeriesfontein Wind Farms</b>	Off-shore wind	Namakwa	Hantam	Loeriesfontein	275.97	Construction
<b>Noupoort Wind Farm</b>	Off-shore wind	Pixley Ka Seme	Umsobomvu	Noupoort	79.05	Operational
<b>Sishen Solar</b>	Photovoltaic	John Taolo Gaetsewe	Gamagara	Kathu Sishen	74.00	Operational
<b>Bokpoort CSP</b>	Concentrated Solar Panel	ZF Mqgawu	Kheis	Kheis	50.00	Operational
<b>Khi Solar 1</b>	Concentrated Solar Panel	ZF Mqgawu	Kai !Garib	Upington	50.00	Operational
<b>Kaxu Solar</b>	Concentrated Solar Panel	Namakwa	Khai-Ma	Pofadder	100.00	Operational
<b>Solar Capital De Aar</b>	Photovoltaic	Pixley Ka Seme	Emthanjeni	De Aar	75	Operational
<b>Kalkbult Soutpan Solar Park</b>	Photovoltaic	Pixley Ka Seme	Renosterberg	Phillipstown	72.50	Operational
<b>Adam Solar</b>	Photovoltaic	John Taolo Gaetsewe	Gamagara	Hotazel	82.5	Construction

CHAPTER  
**two**



Socio-Economic  
Impact  
Assessment

## 2.1 RATIONALE BEHIND SOCIO-ECONOMIC IMPACT ASSESSMENT

The Department of Economic Development and Tourism undertook a survey on socio-economic impact assessment in order to gauge the IPP's contribution to the Socio-Economic Development of their beneficiary communities. The following are the IPP's key stakeholders in their Socio-Economic Development plan:

### 2.1.1 Community/government authority.

IPP's are obliged to adhere to the conditions of their licence to operate by ensuring that they are delivering socio-economic benefits in line with government/community expectations.

### 2.1.2 Policy Makers

The IPP's are also obliged to improve the business enabling environment in order to inform dialogue with policy makers on government's regulatory frameworks that foster innovation and growth in the renewable energy industry. It is the responsibility of the Department of Economic Development and Tourism to take stock of the IPP's socio-economic impacts on the community in terms of the EXCO resolution.

### 2.1.3 Suppliers, distributors, and external partners such as NGOs and donors.

IPP's need to operate its operation at full capacity in order to turn a profit, plans to track community-level socio-economic impact metrics like assist government in establishing SMME's to enter in to their procurement database. IPP's must start piloting a training program for its targeted SMME's suppliers in line with their operational requirements and it must be done in partnership with the external partners.

## 2.2 INTRODUCING THE TERMINOLOGY

The following terminology was used to collect Socio-Economic Development data from the IPP and such model will assist the province in understanding and be able to quantify the IPP's impact on the communities and be able to make similarities between the IPP's pre-and post-intervention.

THE SOCIO-ECONOMIC IMPACT ASSESSMENT SURVEY	
TARGET	GOAL
Impact	Goal level in the lives of the target population (Income level, health status etc.)
Outcome	Changes in the lives of the target population.
Outputs	Volume of MW connected to the grid and number of people reached
Activities	The activities range from products and services.
Inputs	The resources carried out are mostly valued in financial terms (money spent)

## 2.3. KEY MESSAGES

- 2.3.1 Of Course, the greatest obstacle to meeting the challenge of 100% renewable Energy in 10yrs may be deep dysfunction of our politics.....It is only a truly dysfunctional system that would buy into the perverse logic that the short-term answer to high gasoline prices is drilling for more oil ten years from now.

***AL GORE, Speech at Constitution Hall in Washington, D.C., Jul. 17, 2008***

2.3.2 2.3.2 Work is continuing to ensure energy scrutiny. Renewable Energy forms an important part of our energy mix, which also includes electricity generation from gas, nuclear, solar, wind, hydro and coal. Government is committed the overall Independent Power Producers Programme to other sources of energy including coal and gas, in addition to renewable energy.

***Mr Jacob Zuma, President of the Republic of South Africa  
Parliament, RSA, 09 February 2017***

2.3.3 2.3.3 Because we are now running out of gas and oil, we must prepare quickly for a third change, to strict conservation and to the use of coal and permanent renewable energy sources, like solar power.

***JIMMY CARTER, televised speech, Apr. 18, 1977***

2.3.4 2.3.4 Clearly, we need more incentives to quickly increase the use of wind and solar power; they will cut costs, increase our energy independence and our national security and reduce the consequences of global warming.

***HILLARY RODHAM CLINTON  
Speech at Cleantech Venture Forum, VIII, Oct. 25, 2005***





# CHAPTER three



## IPP – SITE VISITS

### 3. IPPS SITE VISITS

#### 3.1 Khobab and Loeriesfontein Wind Farm Projects: *Date of site Visit (2016/05/31)*

This project is located 50-km North of Loeriesfontein under the Municipal Jurisdiction of Namakwa District Municipality. The project entails the construction of the Khobab and Loeriesfontein wind farms, which are situated adjacent to each other in the Hantam municipality, in the Northern Cape, which will have a combined generation capacity of 280 MW. The energy generated by the new wind farms will be sold to South African power utility Eskom, in line with the 20-year power supply agreement, as part of the third round of the Department of Energy's Renewable Energy Independent Power Producer Procurement Programme. The project will be operational by December 2017. The beneficiary community in terms of Economic Development Obligation is the Loeriesfontein Community. The EDM and her team are in the process of embarking on community consultations to identify and take stock of the needs of the community.

#### 3.2 Noupoot Wind Farm: *Date of site Visit (2016/06/02)*

This project is located on a farm about 7 kilometers North East of Noupoot under the Municipal Jurisdiction of Pixley Ka Seme District Municipality (Umsobomvu Local Municipality). The construction of the wind turbines is complete and the project started to operate before September 2016. Noupoot Wind Farm will effectively eliminate approximately 300 000 tonnes of carbon emissions each year when compared to traditional fossil fuel power plants. Noupoot Wind Farm is part of the South African Government's Round 3 Renewable Energy Independent Power Producer Procurement Programme (REIPPP). South Africa Mainstream Renewable Power will manage both the construction and operations of this wind farm. In terms of the SED expenditure, the following areas falling within the 50-km radius will be benefiting. The following are the key focus area in terms of SED:

- ✓ **Education:** This is the highest priority in terms of SED. Although Noupoot Wind Farm is not fully operational, it has introduced Maths and Science in one of the schools and managed to finance the recruitment of Maths and Science



teacher (**Enoch Mthembu High School**) in Noupoort. There will also be an upgrade of the School's Science Lab.

- ✓ **Enterprise Development:** The Wind farm has applied for advance funding from the board of directors to fund the following projects, namely: Helping farmers with input costs, Establishment of a local bakery and the development of Entrepreneurial skills. It has been difficult for the Noupoort Wind Farm to fund the Enterprise development projects and this is due to high illiteracy levels in the area. The intervention will be to establish a skills development centre in order to transfer business knowledge to the members of the community of which it is expected of the community to develop a comprehensive business plans after skills transfer.
- ✓ **Health:** Health intervention is on their SED plans and intervention will be as soon as the project is operational.
- ✓ **Stakeholders' engagement:** Noupoort Wind Farm has quarterly meetings with the Municipality in which they report about progress made in terms of SED expenditure and commitments.
- ✓ **Social Welfare:** 41 houses have been fixed through a roofing project and 36 have completed thus far.
- ✓ **Localization:** Employment: 300 local people were employed during the construction of the project and of the 27 subcontractors on the database, a total of 8 local service providers were employed.

### 3.3 Sishen Solar Facility: Date of site visit (2016/06/09)

The Sishen Solar Energy Facility is a 74-MW solar farm that was as a result of a bid under Round 2 of the Department of Energy (DOE) Independent Power Procurement Program. The Power Purchase Agreement (PPA), Implementation Agreement (IA) and Direct Agreement (DA) were executed on the 9th May 2014 with a Commercial Operation Date (COD) on the 26th November 2014. The project is located within the Gamagara Local Municipality and there are five beneficiary communities that fall within the 50-km radius of the project site, namely: Dibeng, Kathu, Dingleton, Olifantshoek, Wincaton (Sishen), with Dibeng being the "doorstep" community. The local communities benefit through the local community trust which holds a 10% equity stake in the project. Since the construction of the project, a total of 3 732 jobs were created and this exceeds their job creation target. The following jobs were created:



- ✓ **Job Creation during Construction:**
  - Local community employed was 60% of the 3732 of which 63% people were youth and 6% women.
- ✓ **Preferential Procurement**
  - More than 60 EMEs have benefited from the project.
  - Procurement of Women Owned Enterprises.

The summary of Windfall’s Economic Development Obligations and achievements is provided in the table below:

ED Element	Description	Obligation during construction period	Achievements during construction period	Difference
1	RSA based employees who are citizens.	80%	94.01%	14.04%
2	RSA based employee who are black people	47%	78.17%	31.17%
3	Skilled employees who are black people	30%	45.30%	15.39%
4	Jobs created for local communities	20%	59.51%	39.51%
Ownership	Description	Obligation during construction period	Achievements during construction period	Difference
1	Shareholders by black people in the project company	30%	37.88%	7.88%
2	Shareholding by local communities in the project company.	5%	10%	5%
3	Shareholding by black people in the EPC contractor	20%	30.84%	10.84%
Preferential Procurement	Description	Obligation during construction period	Achievements during construction period	Difference
1	BBBEE procurement	50%	101.55%	51.55%
2	QSEs and EMEs procurement	5%	34.23%	29.23%
3	Women owned vendor procurement	2.5%	1.06%	-1.44%

Sishen Solar’s Economic Development Obligations are based on the following key focus areas, namely:

- ✓ **Education** - Sishen Solar has thus far spent part of the SED on education and this budget was allocated to the Feeding Scheme (Sishen has a partnership agreement with Tigerbrands). This intervention has improved the kids’ attendance at schools. Sishen Solar has identified 20 students to study Electrical engineering with Kathu Technical College.
- ✓ **Enterprise Development (Entrepreneurial skills)** – Sishen Solar has identified 25 struggling businesses and they were placed under a one on one mentorship programme. The programme ran until October 2016. The testimony has been that some of these companies have improved in terms of their revenue since the mentorship programme.

### 3.4 Bokpoort CSP:

#### Date of site visit (2016/06/13)

The project is located approximately 30 km North East of Groblershoop under the Municipal Jurisdiction of ZF Mgcawu. The project is valued at R5 billion and provides 50 megawatts per hour. Bokpoort CSP is part of South Africa's Renewable Energy Independent Power Producer Programme (REIPPPP) which, as a project, is rated third in the world. ACWA Power, with its headquarters in Saudi Arabia, was awarded the preferred bidder status in 2013. About 40 percent of the components at Bokpoort CSP were produced in South Africa. Bokpoort CSP's 50-MW is equal to powering 21 000 households and the power produced is fed to Eskom to help cover the country's evening peak demand (17h00 to 21h00). Bokpoort CSP has a 9.3 hours thermal energy storage capacity, meaning it can work day and night. In terms of Bokpoort CSP's Economic Development Obligations, the following communities that are within the 50-km radius from the plant are the beneficiaries of the projects: Groblershoop and Brandboom. Bokpoort CSP has played a role through the following project establishment processes in ensuring that its Economic Development Obligation is achieved:



#### 3.4.1 EDO intervention prior to site Establishment

Bokpoort CSP has adopted the bottom up approach through community consultation meetings in all towns within the !Kheis Municipality and this was done in collaboration with Love-Life and contractors that were responsible for the construction of the plant. Bokpoort relied on the Municipal IDP documents to ensure that the identified projects are in accordance with the Municipal priorities in order to ensure that these projects remain sustainable in the long term.

#### 3.4.2 EDO intervention during ground Clearance

Bokpoort CSP has a board Sub-Committee that was established in October 2014 and this committee is responsible for the approval and disbursements of funds to the communities. The funds are approved advanced by the Board of Directors to enable the beneficiary communities to benefit prior to the contracted period.

#### 3.4.3 EDO intervention during the 1st Year of construction

NO	EDO – PROJECTS	INTERVENTION
1	Computers for Groblershoop High School	Computers and internet access to the School during Q1 OF 2014/15.
2	Duineveld Solar Lighting	Roof Top PV power solution to 300 homes including TV, Radio and Cellphone charging in the 1st quarter of 2014/15
3	Bursary Scheme	Bursaries to local non-technical students for financial management courses in the 2nd quarter of 2014/15
4	Steinmuller Apprenticeship program	Full scholarship for 5 selected candidates for trade tested welder for employment as skilled artisans in the 2nd quarter of 2014/15
5	Palms Technical Training Centre	Partnership with local training institution to offer skills to the local people at the Power Station during construction in the 2nd Quarter of 2014/15
6	Topline Water Reticulation	Provision of water reticulation system to 77 homes in the 4th quarter of 2014/15

## EDO intervention during the 2nd year of Construction and final commissioning

EDO – PROJECTS		INTERVENTION
1	Addressing learning Constraints Uitsig Primary (Opwag)	80 x bicycles, and School Shoes for all kids during the 1st quarter of 2015/16
2	Improving teaching conditions for Uitsig Primary (Opwag)	Provisioning of additional teacher for 1 year, 8 x ceiling fans for 3 classrooms during the 1st quarter of 2015/16
3	Water Geysers for Topline Primary School (Topline)	150 litres of geysers, including installation and delivery during the 1st quarter of 2015/16
4	7 x Creches in all Townships	Supply of educational material and other resources to the Nursery Schools during the 1st quarter of 2015/16
5	Palms Technical Training Centre	Training of 40 candidates on EHS, First Aid, Fire Fighting, Electrical and mechanical short courses during 2nd quarter of 2015/2016
6.	Apprentices	Enrolling 5 more apprentices during Q3 of 2015/16
7	Technical Apprentice Programme	10 students benefitted in mechanical, electrical and chemical fields in the 1st quarter of 2016/17
8	Bursary Scheme	Bursaries awarded to 2015 achiever students registered for Electrical Engineering at CUT and to blind student for special School in the Western Cape during Q1 of 2016/17 financial year.
9	Renewable Power for Creche in Groblershoop.	Provision of Solar PV and battery storage system planned for Q2 of 2016/17 financial year.
10	Bakery (Boegoeberg)	Women vendor, space, equipment, architectural plan, fencing, Building material, Labour, Electricity and plumbing planned for Q4 of 2016/17 financial year.
11	Women sewing group	Women to be provided with equipment and tools in Q4 of 2016/17 financial year
12	Recreational Centre(Grootdrink)	Construction of an events room with a Kitchen, ablution facilities, swings, glides, braai area and parking areas and 2 multi-purpose fields. This is planned for Q1 of 2017/2018 financial year.

### 3.4.4 Five (5) year plan for SED budget allocation

Bokpoort CSP's SED budget is planned to be spent within a period of five years in the following focus areas,

Focus Area	Percentage allocation
Community Wellbeing	36.67%
Education and Training	46.33%
Community Infrastructure	9.16%
Other	7.83%

This plan also includes the Enterprise Development Projects to be rolled out by Bokpoort CSP in the next five years:

Project	Intervention
BEE Farming Initiative	Service provider to be appointed to do a due diligence for an Agri-BEE initiative and this is in partnership with the Department of Trade and Industry.
Business Incubator	Upskilling of SMMEs in partnership with the Department of Trade and Industry.
Local Infrastructure(Road Maintenance)	Focussing on cooperatives from the local area for additional job creation.

### 3.5 !Khi Solar, Kaxu and Xina Solar projects:

**Date of site visit: 14 – 15 June 2016**

**Khi Solar One** (KSO) is a solar thermal plant, located in the Upington under Municipal Jurisdiction of ZF Mgqawu District Municipality. Khi Solar One produces 50 megawatts (MW) covering an area of 140 hectares (346 acres). Abengoa claims it is the first thermal solar power plant in Africa and the first tower plant to achieve 24 hours of operation with solar energy only. Abengoa is currently responsible for the Khi Solar under the ZF Mgqawu District Municipality, Kaxu Solar in Pofadder under the Municipal Jurisdiction of Namakwa District Municipality and Xina (Still under construction) also under the Namakwa District Municipality. The number of megawatts procured from Kaxu and Xina is 200-mw each contributing 50% and this makes them the highest contributors of the SED budget. The following areas are the beneficiary communities of these Solar Plants, namely: Pella, Pofadder, Onseepkans, Witbank and Upington with its areas that are under the 50 kilometre radius.



#### 3.5.1 Economic Development Obligation

The Economic Development budget for all these three projects are shared as follows: Economic Development budget equates to 0.1% and the Socio-Economic Development Budget is 1.9%. The following are the projects funded by these three plants in accordance with the Department of Energy's Economic Development Obligation Budget:

### 3.5.1.1 Skills Development Centre – Pofadder

#### DESCRIPTION

This project is located in Pofadder next to the Pofadder Hotel. This Centre has 30 laptops and can accommodate 30 Youths for one session. The courses offered are mostly Word, Entrepreneurial courses running for 3 – 5 days.

The Economic Development Unit is in the process of rolling out internet services to ensure that community members have access to web information.

#### EVIDENCE – Kaxu Project



### 3.5.1.2 Francois Visser Primary School – Pofadder

#### DESCRIPTION

The ED intervention is on the Security System, the alarm system and the upgrading of School fencing. The intervention is also on Food Gardening and the Bus for transporting of kids to the Sports Competitions.

#### EVIDENCE - Kaxu Project



### 3.5.1.3 Pella Soup Chicken – Pella

#### DESCRIPTION

This area caters for the kids from poor backgrounds and the elderly. They are receiving two meals per day.

#### EVIDENCE - Kaxu Project

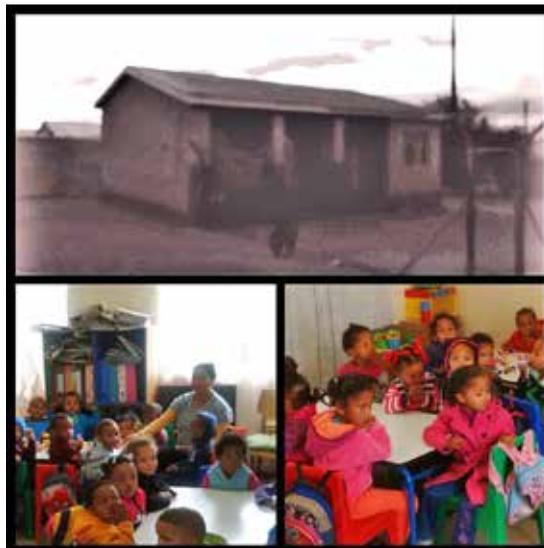


### 3.5.1.4 ECD centre – Pella

#### DESCRIPTION

Annual financial commitment to the feeding programme.

#### EVIDENCE - Kaxu Project

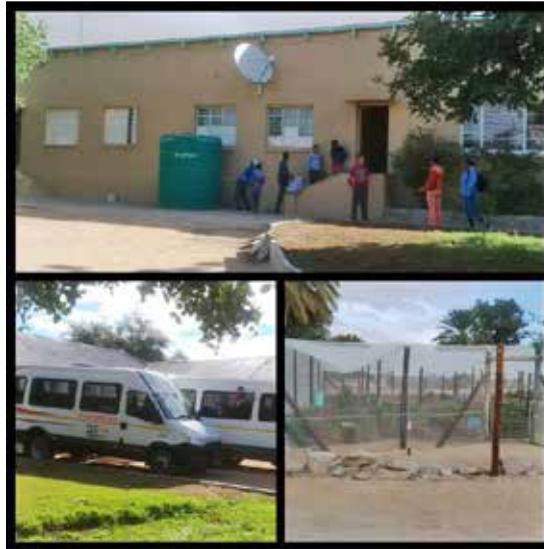


### 3.5.1.5 Bright Lights Orphanage Centre.

#### DESCRIPTION

It's a home-based care centre for the Orphans. Additional intervention is the funding of the teachers to attend a course on Child Care for a period of 18 months.

#### EVIDENCE - Kaxu Project



### 3.6 Solar Capital

#### Date of site Visit (2016/08/18)

Solar Capital is located 6 km outside the town of De Aar in the Northern Cape. The project expands over 100 hectares of Emthanjeni Municipality owned land. The facility generates electricity using 167 580 solar (PV) panels and feeds the 132 kV Eskom distribution system. Arising from the South African Government's Renewable Energy Independent Power Producer Procurement Programme (REIPPP), De Aar Solar Power has signed a 20-year Power Purchase Agreement with Eskom as well as an Implementation Agreement (Economic Development Obligation) with the Department of Energy. It mobilised its construction teams in December 2012 and reached Commercial Operations date in mid-2014. The solar power project generates 85 458 MWh per year, supplying enough clean, renewable electrical energy to power more than 19 000 South African homes.



#### 3.6.1 Economic Development Obligation (EDO) – Solar Capital De Aar

De Aar Solar Power's Economic Development Programme has contributed over R10-million during the first 2 years of operation. 75% has been contributed to a number of social economic beneficiaries. 25% has been allocated to the benefit of various local businesses, as part of enterprise development.

EDO	CURRENT INTERVENTION	FUTURE INTERVENTION
Focus areas	Type of intervention	Type of intervention
Education and training/1	<ul style="list-style-type: none"> <li>• Training of 20 community health care workers with the University of Stellenbosch. The graduation ceremony was held in 2017 – <b>De Aar</b></li> <li>• Training centre (Equipped computers with internet access) – the centre has been in operation for 2 years. The centre host 22 students and the courses offered includes enterprise development to help emerging entrepreneurs with business skills – <b>De Aar</b></li> <li>• University of the Free State – Assist with short course on business skills.</li> <li>• Vaal University of Technology assist with computer literacy course.</li> </ul>	-
Community Wellbeing	<ul style="list-style-type: none"> <li>• Foetal, Alcohol and Related Research (FARR) – helps improve the health of the mother and the baby. Foetal Alcohol Syndrome was the highest in De Aar and currently since the FARR intervention and it has dropped by 30% which is the highest drop in the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Father A Nation (FAN) – Initiative that encourages MEN to curb alcohol abuse.</li> </ul>
Community Infrastructure		<ul style="list-style-type: none"> <li>• Sports facility upgrade – This initiative will help the Schools to fully participate in different sporting codes.</li> </ul>
Enterprise Development	<ul style="list-style-type: none"> <li>• Waste management project – This project is owned and managed by a beneficiary of the community training centre. The project focusses on the recycling of glass.</li> </ul>	<ul style="list-style-type: none"> <li>• Hydroponic Project – Revitalization of the project.</li> <li>• Upgrading of De Aar 40-bedroom hotel to be completed in the next three months.</li> </ul>

3.6.1.1 EDO Projects:  
 Pictures taken on the 18th August 2016

EDO PROJECT	
DESCRIPTION	PROJECT
De Aar – Community Training Centre	
Foetal, Alcohol and Related Research - FARR	
Ethemjeni Community and Trauma Centre	

**EDO PROJECT**

**DESCRIPTION**

**PROJECT**

**Upgrading of De Aar Hotel**



**Revitalization of the Hydroponic Project**



**De Aar – Upgrading of Sports facility Centre**



### 3.6.1.2 Kalkbult Soutpan Solar Park:

**Date of site visit: 2016/08/19**

Scatec Solar was awarded the 75 MW Kalkbult project in December 2011. The Kalkbult site is the largest project awarded in the 1st bidding round in South Africa, accounting for 12% of overall volume. Scatec Solar initiated the development, partnering with Simacel a local project developing company. The 75 MW power plant was completed in record time (January 2013 – September 2013) and was grid connected three months earlier than planned. Scatec Solar took the leading role for all EPC activities and managed the construction phase. Scatec Solar takes full responsibility for all operations and maintenance services: monitor the plant, take corrective and preventive maintenance measures, reporting to utility and owners.



### 3.6.1.3 Economic Development Obligation (EDO) - Kalkbult Soutpan Solar Date of site visit (2016/08/19)

Scatec Solar contributes to local communities through Economic Development initiatives. Scatec Solar has adopted the following strategic approach in ensuring that their beneficiary communities benefit in terms of their Economic Development Initiatives:

✓ **Engage and ignite**

Scarlet will approach the community and assess on how they can help and what they have.

✓ **Empower and Support**

This is achieved through skills development and education.

✓ **Enable and Partner**

Needs assessment, support and partnership.

The EDO budget is channelled to the following programmes, namely:

#### **SED Programmes**

Significant financial contributions to Socio-Economic Development programmes contribute directly to the local communities where they operate. These initiatives not only contribute to local value creation and development, they also improve the engagement and dialogue with the local community which can be crucial to the successful completion of the project.

## ED Programmes

EDO	CURRENT INTERVENTION
Focus areas	Type of intervention
Education and training	<ul style="list-style-type: none"> <li>Supply of school furniture and transport grant – benefiting 642 children in Phillipstown and Visisani Primary School.</li> <li> <b>Dreamfields Project</b> <p>The Dreamfields Project began operating in July 2007. Dreamfields’ goal has been to create sustainable communities through football and netball. It uses these sports as a tool for enriching the educational environment in South African townships and rural areas. Dreamfields’ key activities have been providing schools in townships and rural areas with basic football and netball equipment; organising programmes of weekly league-based football and netball; upgrading fields within constraints of available resources; and providing teachers and others with basic coaching education. Looking ahead, Dreamfields’ focus is on creating the internal Dream Leagues, which offer a way of scaling up participation levels dramatically without increasing costs.</p> <p>The primary objective of the project is to provide teachers and community coaches with basic skills and equipping seven schools with football and netball equipment, and introducing mass participation in both programmes in each of the seven schools.</p> </li> <li> <b>Fieldband Foundation</b> <p><i>Field Band Foundation music and dance project-benefiting six Schools.</i> Field Band Foundation NPC (FBF) was established in 1997 and has developed into a powerful example of youth leadership through the arts. The holistic youth development model of FBF engages marginalised youth across South Africa, providing a unique experience in life skills and wholesome development through the medium of music and dance. The FBF’s work is not simply an arts programme but a dynamic, real-life experience whereby members learn critical life skills such as teamwork, discipline, time management, conflict resolution, facilitation and motivation skills, and develop values and an identity that respects the rights of others. The model takes care to enhance social cohesion in communities and promote equality and integrity. The primary objective of the funded project was to enhance skills and develop the youth and work together with the respective communities to improve their socio-economic differences.</p> </li> </ul>

<b>EDO</b>	<b>CURRENT INTERVENTION</b>
<b>Focus areas</b>	<b>Type of intervention</b>
<b>Community Wellbeing</b>	<ul style="list-style-type: none"> <li>The Foundation for Alcohol Related Research (FARR) – The Foetal Alcohol Spectrum Disorder (FASD) programme.</li> <li>The Foundation for Alcohol Related Research (FARR) was established in 1997 and is based in Rondebosch in the Western Cape. Through its services, FARR aims to reduce the incidence of foetal alcohol spectrum disorder(FASD), including foetal alcohol syndrome(FAS). FARR works in communities where a high prevalence of FAS has been recorded (Western Cape and Northern Cape). The range of FARR’s services is comprehensive.</li> </ul> <p>FARR believes in indirect community interventions based on partnerships with the community and the local Department of Health, supported by research. Programmes include social awareness; research related to FASD; training, education and mentorship; support services; and diagnosis and management. It has become a hub for experts, community workers and everyday South Africans who are determined to improve the lives of those affected by FAS, their families and caregivers. The primary objective of the project is to address alcohol abuse and FASD within the local community.</p>
<b>Community Infrastructure</b>	<ul style="list-style-type: none"> <li>The infrastructure project at four ECD and ECD practitioner training project. The Custoda Trust was established in 1993 and is based in Delportshoop in the Northern Cape. Custoda Trust is an early childhood development (ECD) resource and training organisation that offers accredited level 4 and 5 training, as well as a number of short courses to ECD practitioners; adult basic education and training (ABET); food garden training; and HIV/AIDS training for caregivers of orphans and vulnerable children (OVCs). Custoda is one of the few ECD organisations that has developed an accredited module at level 4 for the inclusion of children with special needs. It has also been involved in national ECD audit of ECD centres, which started in the Northern Cape. The primary objective of the project is to equip ECD practitioners with level 4 training and to improve the conditions of the ECDs in Petrusville and Phillipstown.</li> </ul>
<b>Enterprise Development</b>	<ul style="list-style-type: none"> <li>The Enterprise development obligation is awarded to eligible local SMMEs chosen as Economic Development grant beneficiaries. The grant aims to assist and accelerate the entity’s development as a professional local service sub-supplier to the project and in the future to other businesses in the community. The ED grant contribution is planned to be spent on assisting enterprises with the following elements: <ul style="list-style-type: none"> <li>✓ Business set up cost</li> <li>✓ Training and upskilling of staff</li> <li>✓ Job creating initiatives.</li> </ul> </li> </ul>

### 3.6.1.4 Pictures taken on the 19th August 2016 – EDO PROJECTS

DESCRIPTION	EDO PROJECT
DESCRIPTION	PROJECT
<p>One of the four ECDs sponsored by Scatec in partnership with Custoda Trust</p>	
<p>Supply of School furniture and transport grant – benefitting 642 children</p>	
<p>Dream fields sustainable football project benefitting 6 Schools</p>	

**EDO PROJECT**

**DESCRIPTION**

**PROJECT**

**Dream fields sustainable netball project benefiting 6 Schools**



**Fieldband Foundation music and dance project benefiting 6 schools**



**FARR Offices in Phillipstown**



## EDO PROJECT

### DESCRIPTION

### PROJECT

#### Petrusville High School



### 3.7 Adam Solar Facility - Kathu

The Adams 75 MW Solar Project is located near Kathu in the Northern Cape Province. This project was conceived by APS from inception and has been sold to Enel Green Power, an Italian Utility. APS still manages certain aspects of the development and construction activities. The project will provide 170 million kWhs of clean energy per year and create around 1800 equivalent jobs over its operating life. The project is also supporting a number of local socio-economic development initiatives. The following are the beneficiary communities; Tlapeng, Dinokaneng, Tsineng-Kop, Mokalanoga, Gasese, Maipeng, Tsineng, Magobing, Magojaneng, Masankong, Kanana and Gatshekedi.



#### 3.7.1 Job creation during construction

Sub-Elements	Compliance obligations	Construction jobs	Operations jobs	Beyond compliance
<b>South Africa Citizens</b>	93.34%	414 Jobs	1443 Jobs	Youth and women – ensuring representation via EPC contractors
<b>Black citizens</b>	78.06%	287 Jobs	1265 Jobs	On-Site apprenticeship for unskilled labour
<b>Skilled black citizens</b>	56.24%	39 Jobs	292 Jobs	Demobilisation strategy that will focus on post construction education (bursary)
<b>Local citizens</b>	61.81%	206 Jobs	1023 Jobs	On-site training for O&M phase (diploma programmes)

### 3.7.2 Local Content

Sub-Elements	Compliance obligations	Beyond compliance
Key components	51.87%	Early identification of key suppliers – WOV, QSEs, SMES, Local suppliers.
		Local Suppliers chain support – formalization and record keeping.
		Educate SMMEs & WOV about Renewable Energy Opportunities.
		Marketing: Cross – project linkages despite different EPC/O&M.

### 3.7.3 Preferential Procurement

Sub-Elements	Compliance obligations	Beyond compliance
BBBEE	77.04	Early identification of key suppliers – WOV, QSEs, SMES, Local suppliers.
QSE	17.7%	Local Suppliers chain support – formalization and record keeping.
Women owned vendors	5.26%	Educate SMMEs & WOV about Renewable Energy Opportunities.
		Marketing: Cross – project linkages despite different EPC/O&M.

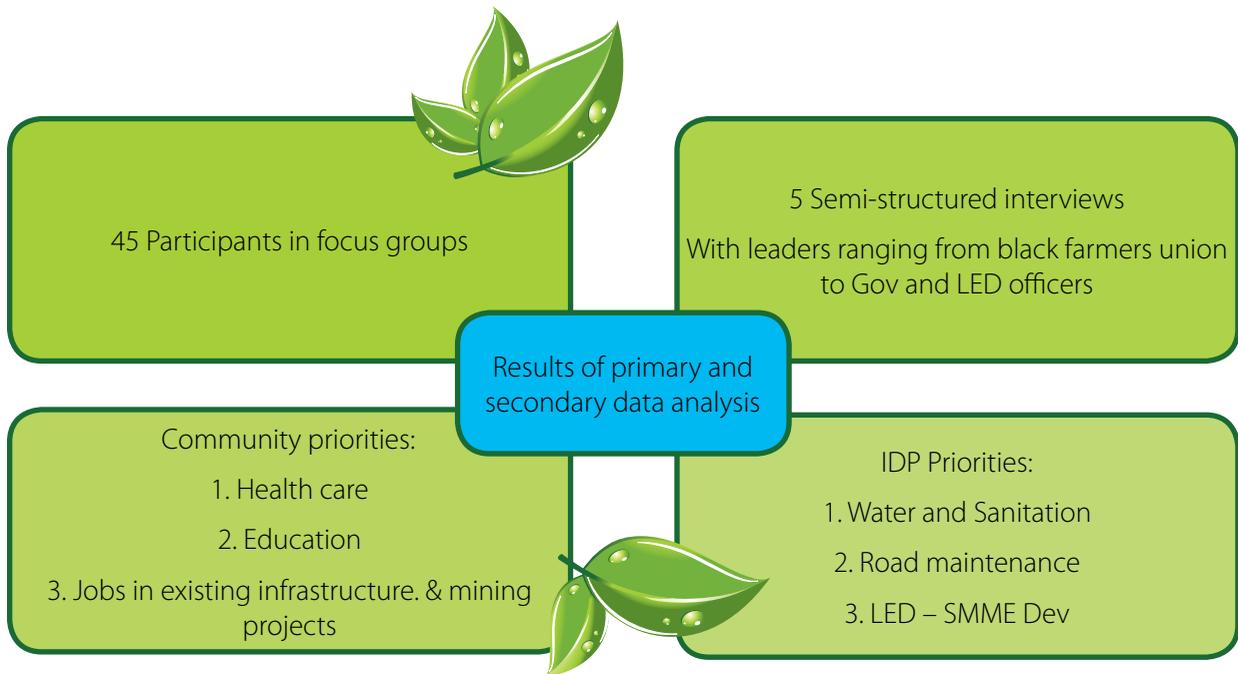
### 3.7.4 Enterprise Development

Sub-Elements	Compliance obligations	Beyond compliance
Enterprise Development contributions	0.6%	Invest in ED during construction to leverage project opportunities.
		Develop local industry to respond to the infrastructure needs of the sector and beyond.
		Connect local enterprise to national and global value chains.
		Create community based development professionals.
		Measure impact, not just accounting for expenditure.

### 3.7.5 Socio-Economic Development

Sub-Elements	Compliance obligations	Beyond compliance
Socio-Economic Development Obligations contributions	1.5%	First SED project to be implemented during construction phase to avoid deayed scial benefit.
		Link Skills development to enterprise opportunities to ensure post quakification demand.
		Measure impact, not just accounting for expenditure.
		Build a local development institution with research, fund-raising and project management capabilities.

The following diagram was an approach used to measure the Socio-Economic Needs of the beneficiary communities.





# CHAPTER **four**



## FINDINGS & RECOMMENDATIONS

## 4. FINDINGS AND RECOMMENDATIONS

### 4.1 Education:

IPPs find it difficult to reach out to the beneficiary communities to implement their Economic Development Obligations and this is due to the high level of illiteracy. For these IPPs to consider the residents of the beneficiary communities for permanent decent jobs there is a need for Maths and Science subjects especially for electrical engineering positions and other science related job opportunities. The IPPs realised that there is a lack of learners with Maths and Science in their beneficiary communities and as such they show a very strong intervention in supporting the schools with funding for the appointment of reputable Maths and Science teachers to ensure that learners are receiving in-depth knowledge of Maths and Science. This is an opportunity for the Department of Education to work with the IPPs to ensure that Maths and Science receive priority in their schools.



**EDUCATION IS THE MOST POWERFUL  
WEAPON ONE CAN USE  
TO CHANGE THE WORLD.**

~ ~ NELSON ROLIHLEHLA MANDELA

### 4.2 Enterprise Development

Funding of the Enterprise Development projects has been a serious challenge to the beneficiary community due to a lack of business skills. The IPPs prioritise skills development: One good example is the Skills Development Centre funded by !Kaxu Solar. This Development Centre offers Business Courses in accordance with the Vaal University of Technology curriculum. This is an intervention programme used to equip the community with skills and expertise to be able to draw up their own business plan for funding application.

### 4.3 Economic Development Obligations

The IPPs have entered into a 20-year Power Purchase Agreement with Eskom and on average the 20-year EDO budget is estimated at approximately half a billion per IPP. The IPPs will indeed find it difficult to address the EDO on their own and there is therefore a need for the establishment of District project approval committees in Municipalities where the IPPs are operating in to play a role in the implementation of the SED projects. The EDO's budget could also be used as a funding instrument for IDP projects of the beneficiary Municipalities.

### 4.4 Community expectations

Independent Power Producers have brought great promise to the beneficiary communities but in many cases, they are faced with difficulties in community engagement. On-going community consultation is imperative in managing the community's unrealistic expectations. There is a need for a collaborative partnership between Government, NGOs and Municipalities to develop a common approach in managing the community expectations.

### 4.5 The Special Economic Zone

The Special Economic Zone in Upington must be used as an incubation centre to promote localization. SMMEs must be housed at the SEZ centre and be provided with the necessary capacity and resources for them to participate in the IPPs procurement program.

### 4.6 Renewable Energy Conference

There is a definite need for the Renewable Energy Summit to take place in the Province and it is imperative that Investment and socio-economic opportunities that exist in IPP projects be unpacked and shared with Northern Cape Communities and the aspiring emerging SMMEs in the renewable energy space.

#### 4.7 Joint Planning and Implementation Forum (JPIF)

There is a need for the establishment of a Joint Planning and Implementation Forum in all the District Municipalities in the Province. The forum idea was introduced to all the assessed IPPs during the Socio-Economic Development Survey. The Joint planning and Implementation forum will be responsible for the following, namely:

- ✓ To assist the IPPs in the planning and implementation of the EDO budget;
- ✓ Act as advisory committee for the SED and ED budget;
- ✓ To ensure that the beneficiary communities get access to opportunities that exist in the IPP procurement process;
- ✓ To ensure that the project addresses the core needs of the communities;
- ✓ To ensure that there is transparency in the project identification and implementation of EDO budget.

#### 4.8 Renewable Energy Implementation Protocol between the Minister of Energy, the Premier of the Northern Cape and the Municipal Mayor on Independent Power Producers

There is a need for the speedy approval of the protocol document in order to oversee the JPIF. The purpose of the protocol is:

- ✓ To establish an agreed framework for cooperation and coordination between the Parties: an Implementation Protocol between the Minister of the Department of Energy and Executive Mayor / Mayor of the District and or Local Municipality on the Renewable Energy Independent Power Producer investor;
- ✓ To promote the objectives of the Independent Power Producer Procurement Programme through localization;
- ✓ To confirm the Municipalities' agreement and commitment to achieving the objectives and ensure value addition;
- ✓ To promote SMME development and linkages with established businesses through IPP projects and programmes that maximise job creation and alleviate poverty;
- ✓ To confirm the agreement and commitment of each Municipality to achieve the targeted number of opportunities by the specified time frames and ultimately optimise job creation
- ✓ To specify the institutional structures that will oversee, monitor and report on progress in implementing and achieving the IPP targets as set out
- ✓ To provide for mutual assistance and support in respect of the programmes, projects and initiatives of the Programme

#### 4.9 Municipal Intervention

There is a need for the municipality to play a key role in ensuring that the Economic Development Obligation projects are looked after to ensure their sustainability. There is therefore a need for the IPPs to jointly sit with the Municipality to identify and implement projects. The IDP of the Municipality could assist the IPP in the identification of the projects.



**The Municipality to play a role in ensuring the sustainability of the IPP's EDO projects**

#### 4.10 Monitoring and Evaluation

There is a need for the Department of Energy to play an oversight role in ensuring that IPPs fully address the government implementation framework.

#### 4.11 Provisioning of surplus electricity to the local municipality

The majority of the Municipalities in South Africa are owing Eskom a lot of money and this might result in the community suffering from a lack of electricity supply. This will also affect the business community and ultimately having a negative impact on the communities. IPPs were urged to look at the possibilities of supplying surplus electricity to the municipalities.



## 5. CONCLUSION

Given what one has seen on the ground, it's important to indicate that the IPPs have so far made an impact on certain focus areas that are within their Economic Development Obligations with education continuing to take the centre stage. One has seen Bokpoort CSP and both Khi Solar One and Kaxu Solar seriously working with the communities in addressing their needs. IPPs will be with the community for a period of 20-years or more and one is confident that there will be a tremendous impact on the lives of the beneficiary communities in the long run. The Department of Economic Development and Tourism proposed as follows:

- ✓ That a District Project Approval Committee be established in each of the District Municipalities to assist IPP in their EDO implementation plans.
- ✓ That there be an ongoing community consultative forum to ensure transparency and commitment of the IPPs in terms of their Economic Development Obligations.

All the IPP projects in the province are for business people with heavy financial muscle and this proves to be difficult for SMMEs to take ownership of the renewable energy space. The least that Government could do is to support the SMMEs to participate in off-grids initiatives ranging from roof top solar and biomass.



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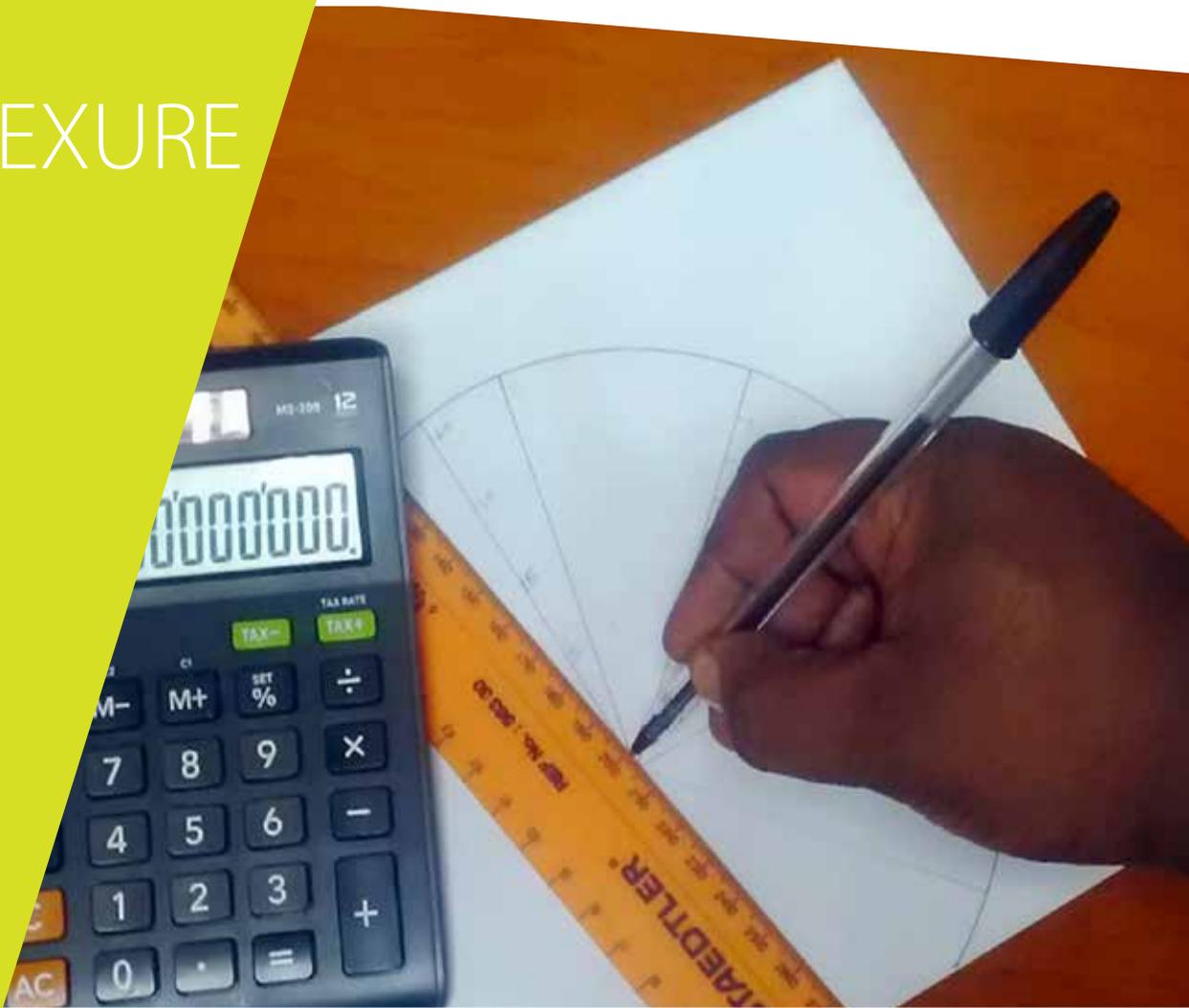
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# ANNEXURE a



## SOCIO-ECONOMIC IMPACT ASSESSMENT GUIDELINE DOCUMENT

## MEASURING SOCIO-ECONOMIC IMPACT ON INDEPENDENT POWER PRODUCERS PROJECTS A GUIDE FOR THE DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM

### EXECUTIVE SUMMARY

The purpose of this Socio-Economic Impact Assessment guideline is to assist the Department in developing information gathering tool with regards to the impact that the Independent Power Producers Projects have in the community of the Northern Cape. There is indeed urgency in addressing the province's sustainability challenges, including poverty, social unrest, climate change. Having the technologies, innovation capacity, resources and skills, these projects have a key role to play in providing radical solutions the province desperately needs. The province is a host to more than 59 projects and unfortunately the province is not able to give its own assessment report (The municipalities in particular) on the SED commitments per project. This guideline will therefore assist the Department of Economic Development and Tourism to capture and measure the socio-economic impact per project. Having this guide in place the Department will be in a position to address an area which has so far been not attended to by the province: The **Measurement and Management** of the IPP's **Socio-Economic Impact Assessment**.



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1. **Problem statement**
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    - 4.1.1. Obtaining or maintaining licence to operate
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      - 4.2.2.2. Communicating with stakeholders about the socio-economic impact of the IPPs
  - 4.3. **The tools**
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# 1. PROBLEM STATEMENT

The **Renewable energy projects** are recognized as important forms of development assistance for addressing the energy demands in the Country. **The Department of Energy (DoE)**, National Treasury (NT) and the Development Bank of Southern Africa (DBSA) established the Independent Power Producers Procurement Programme Unit for the specific purpose of delivering on the IPP procurement objectives. **In November 2010** the DoE and NT entered into a Memorandum of Agreement (MoA) with DBSA to provide the necessary support to implement the IPPPP and establish the IPPPP Office. **The IPPPP** has been designed not only to procure energy, but has been structured to also contribute to the broader national development objectives of job creation, social upliftment and broadening of economic ownership. From the completed four bid windows, a total number of **112 IPPs** have secured contracts with Government to produce Renewable Energy with a combined nameplate capacity of **6 327 MW**. **At least more than 59** of these projects are located in the Northern Cape Province and it is important to indicate that the Government was not involved during the procurement processes and this renewable energy initiative is mainly private sector driven. This really created a situation where the Government is not in a position to comprehensively report on the Socio-Economic Impact that these projects have in the Northern Cape Community. **It is in light of the above statement that the Department of Economic Development and Tourism** seeks to better understand the **impact and conditions** that influence sustainability of these projects. It is of paramount importance to evaluate or take stock of the current and future socio-economic benefits that will accrue in the future.



# 2. BACKGROUND

The Department of Energy's (DoE) Independent Power Producers Programme (IPPP) was established at the end of 2010 as one of the South African Government's urgent interventions to enhance the country's power generation capacity. The programme's primary mandate is to secure electrical energy from the private sector, drawing from both renewable and non-renewable energy sources. It is also designed to reduce the country's reliance on fossil fuel, stimulate a local renewable energy industry and **contribute to socio-economic development and environmentally sustainable growth**. The programme also contributes to alleviating the electrical energy shortfall South Africa is facing. In this context the DoE is in the process of procuring **3 566MW portfolio of renewable energy** comprising of **Solar, Hydro, Wind and waste**. The province is a host to **59 of the 112 IPP projects** in the country of which **more than 23 projects** are currently generating more than 1200 **to the grid** and it is therefore expected that these IPP to contribute 3,566MW to the total procured RE capacity once construction is complete. Attached as **Annexure A**, is a **list of IPP's** in the Province. The Northern Cape Province is by far the best area highly suitable for the Solar Energy. The Northern Cape Provincial Spatial Development Framework (2012) specifically recognises the potential for solar development in the province, identified with the introduction of a solar corridor stretching between ZF Mgcawu and the Pixley ka Seme regions. The province intends to become a net producer of RE to the rest of the country by

2020 by inviting investment and development into the province. It is important that NC Province should see the benefit from the significant **associated investments** and the **socio economic commitments** that have been secured for local communities through the procurement process.

### 3. THE OBJECTIVE

The objective of this guideline is to help the **Department to gauge the IPP’s** which tool or combinations of tools best meet their socio-economic impact measurement needs – thereby enabling and accelerating business action to align profitable business ventures with the needs of society and contribute to a more sustainable environment.

### 4. THE GUIDELINE

The guideline is divided into four parts, namely:

The business case	The essentials	The tools	The road ahead
Provides an overview of the business case for measuring the IPP’s socio-economic impact (SEI).	It explains the terminology and basic theory behind measuring Socio-economic impact.	Profiles selection of tools available in measuring the SEI.	Reflects on the landscape of available tools and suggest the best efficient tool.

#### 4.1. The Business Case

IPP’s are one of the key drivers of Socio-economic impact – and socio-economic impact is a major predictor of business success, especially in the long term. By creating jobs, training workers, building physical infrastructure, procuring raw materials, transferring technology, paying taxes, and expanding access to products and services ranging from food and healthcare to energy and information technology, companies affect people’s assets, capabilities, opportunities, and standards of living –sometimes positively, sometimes negatively. As a result, companies are increasingly interested in measuring their socio-economic impact for a variety of reasons, ranging from **reducing cost and risk to creating and capturing new opportunities**. These reasons include:

##### 4.1.1. Obtaining or maintaining license to operate

Measuring socio-economic impact can help companies show communities, government authorities, and other stakeholders, like donors and civil society groups, that their activities create net benefits for the economies and societies in which they operate – and mitigate the risk of negative publicity, protest, and declining government support for current and future operations.

##### 4.1.2. Improving the business enabling environment

Measuring socio-economic impact can help IPP’s show policymakers what and how they contribute to public policy goals through profitable business activity – helping those policymakers develop the right mix of **rules, incentives, and public services needed to maximize the business contribution**.

### 4.1.3. Strengthening value chains

Measuring socio-economic impact can help companies predict the loyalty, performance, stability, and capacity for growth of suppliers, distributors, and retail partners – identifying vulnerabilities and opportunities to address them.

**Table 1: Rationale behind SEI**

<span style="color: green;">←</span> <b>Reduce cost and risk</b> ===== <b>Capture opportunity</b> <span style="color: green;">→</span>		
<p>Obtain or maintain license to operate</p> <p>Key stakeholders: <b>Community/government authority.</b></p>	<p>Improve the business enabling environment</p> <p><b>Key stakeholders:</b> <b>Policy Makers</b></p>	<p>Strengthen value chains</p> <p>Key Stakeholders <b>Internal Colleagues, suppliers, distributors, retailers, customers and external partners such as NGOs and donors.</b></p>
<p>IPP's to ensure that they are delivering socio-economic benefits in line with government/community expectations.</p>	<p>Department measures the socio-economic impacts of IPP's in order to inform dialogue with governments on regulatory frameworks that foster innovation and growth in the renewable energy industry.</p>	<p>IPP's need to operate its operation at full capacity in order to turn a profit, plans to track community-level socio-economic impact metrics like assist government in establishing SMME's to enter in to their procurement database.</p>
<p>This guide is to be used by the Department as a socio-economic impact assessment tool as the basis for engagement with a wide range of local stakeholders, identifying differences in perception and targeting social investment and communication strategies accordingly.</p>	<p>IPP's to use socio economic impact measurement to show governments how it contributes to development in the communities where it operates – so the government doesn't feel it must obtain those contributions through taxation.</p>	<p>IPP's must start piloting a training program for its targeted SMME's suppliers in line with their operational requirements and it must be done in partnership with the external partners.</p>

### 4.2. The essentials

This is the core topic where the Socio- Economic Impact Assessment questionnaire should emanate from- The SEI survey will therefore be guided by the questionnaire attached as Annexure B. The Socio-economic impact is what these IPP's are in business to achieve. The beneficiary community has its own language and mental models which are reflected in many of the socio-economic impact measurement and which can be unfamiliar to the corporate users. It is therefore important to know how they think and what specific impact measurement key words mean to them. The essentials' basic element is therefore presented in the following five key lessons:

#### 4.2.1. Lesson 1:-

The first step is to understand how **IPP's activities translate into socio-economic impacts**. This pathway has also been called a "logical framework" or "log frame" and a "route to impact". In essence, it is a hypothesis about how business activities translate into socio-economic impacts- which can then be tested through measurement.

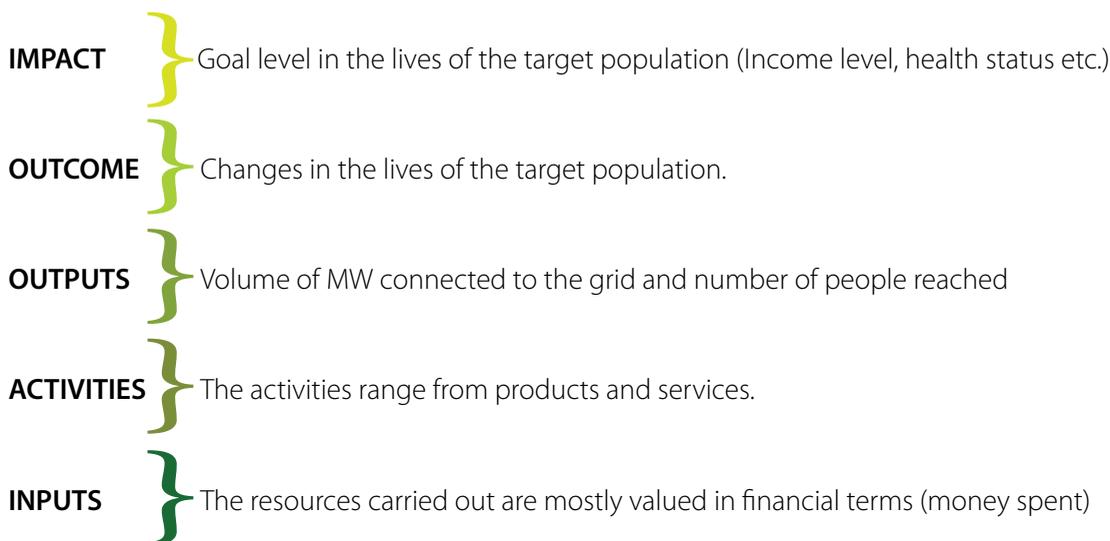
#### 4.2.2. Lesson 2:-

**Measurement** can happen anywhere along the **IPP's results chain** and socio-economic impact will therefore be assessed along the following value chain:

Results Chain	Measurement
Planning	Value is mostly created by the engagement of specialised individuals and companies to conduct <b>resource assessments, feasibility studies, project designs, legal activities, etc.</b>
Manufacturing	Value can be created from the <b>sourcing of raw materials</b> , to component <b>manufacturing and assembly</b> . For wind technology, value can be created from the manufacturing of subcomponents such as rotor blades, towers and nacelles. For photovoltaic plants, value is created in the different steps from the production of silicon to manufacturing modules and in the additional components such as inverters, mounting systems, combiner boxes, etc.
Installation phase	Value could arise mostly from <b>labour-intensive activities</b> involving <b>civil engineering infrastructure works</b> and assembling of wind or solar plants. These are typically carried out by local engineering, procurement and construction companies, thereby creating value domestically. However, if the <b>equipment is imported, manufacturers</b> can be responsible for installation activities.
Grid connection stage	This stage involves <b>highly skilled grid operators</b> responsible for integrating renewable generation as well as <b>local companies to undertake infrastructure development necessary to facilitate grid connection</b> . For instance, grid connection of wind farms consists of cabling work within the wind farm itself (between turbines) as well as connecting the farm to the grid.
Operation and maintenance	This is a long-term activity that offers <b>opportunities for domestic value creation</b> , regardless of a country's local renewable energy technology manufacturing capabilities. Wind and solar plants require personnel for operation and <b>maintenance activities such as regular plant monitoring, equipment inspections and repair services, thus creating long-term jobs</b> .
Decommissioning of renewable energy plants at the end of their lifespan	Value is created in <b>related recycling industries, demolition activities</b> , and <b>refurbishing of equipment</b> for sale to other markets.

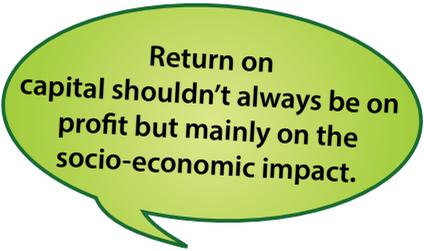
### 4.2.2.1. Introducing the terminology

The questionnaire format will be generated using the following terminology:



### 4.2.2.2 Communicating with stakeholders about the socio-economic impact of the IPP's.

Governments, inter-governmental organizations, civil society groups, social investors, ethical consumers, shareholders, and employees are increasingly interested in business' socio-economic impact. The stakeholders are conscientious, and wish to be associated with organizations which make a positive contribution to society. These stakeholders want evidence to justify spending taxpayer, donor, and personal resources to work with companies. A common criticism of efforts to measure business' socio-economic impact to date is that they are limited to "inputs," "activities," and "outputs" as opposed to "outcomes" and "impacts." These tips can help companies communicate with stakeholders, both internal and external, about their socio-economic impacts. After gathering of information through the questionnaire, the Department should be able to report on the Impact or anticipated impact that this project has or will have on the target community.



### 4.3. The tools

List of tools to be used during the socio-economic survey:

TOOL NAME	VALUE TO IPP PROJECT
Base of the Pyramid Impact Assessment Framework	Understand and measure how IPP influences different dimensions of poverty in the surrounding communities.
Impact Measurement Framework	Identify relevant socio-economic indicators to measure impact in IPP.
MDG scan	Estimate the number of people the IPP is affecting in ways related to the Millennium Development Goals.

TOOL NAME	VALUE TO IPP PROJECT
Measuring Impact Framework	Define the scope of the assessment, identify socio-economic impact indicators for measurement, assess the results, and prioritize issues for Government response
Poverty Footprint	Understand the IPP's impact on poverty reduction working in collaboration with a development NGO.
Socio-Economic Assessment Toolbox	Measure and manage the local impacts of site level operations.
Input-Output Modelling	Calculate the total number of jobs supported and economic value added by the IPP and its supply chain on a national economy.

#### 4.4. The Road Ahead

This guide has been developed to help the department to collect data guided by the two essential tasks:

**4.4.1. To define and articulate the business case for socio-economic impact measurement** to be addressed with the IPP.

- ✓ **Measuring socio-economic impact** will help companies with a host of strategic imperatives, including obtaining or maintaining license to operate, engaging policymakers to improve the business enabling environment and strengthening their value chains.

**4.4.2. Finally, it will help the IPP's understand the essentials of impact measurement theory and Communicate with internal and external stakeholders on the subject.**

- ✓ For collaboration to happen, government and civil society stakeholders need evidence that business has what it takes to be part of the solution. These stakeholders are increasingly aware of the logic – that by creating jobs, training workers, building physical infrastructure, procuring raw materials, transferring technology, paying taxes, and expanding access to products will ensure consistent support to the project.

## 5. REPORTING LEVEL.

REPORTER	RECIPIENT	USER
Manager: RE	<p><b>Technical Cluster:</b> Inputs and Comments</p> <p><b>Economic Cluster:</b> Questions, inputs and support.</p> <p><b>Executive Council:</b> Inputs, comments, support and adoption.</p>	DEDaT



ANNEXURE  
**b**



SOCIO-ECONOMIC  
IMPACT QUESTIONNAIRE

# SOCIO-ECONOMIC IMPACT QUESTIONNAIRE

## SECTION ONE (1): SOCIO-ECONOMIC IMPACT SURVEY

This questionnaire measures the following project developmental elements, namely: **Impact, Outcome, Output, Activities, Input and Infrastructural requirements**. The questionnaire further seeks to align the project's different segments of value chain with the **Developmental Elements** by addressing the following issues: **Project Planning, Manufacturing, installation, grid connection, operation and maintenance**.

"Impact":	What Impact has your project had on the target community?		
	Indicators	Current state	Future state
<p>Goal-level changes in the lives of the target population (and even future generations). Common "impact" indicators include changes in educational attainment, health status, and income level.</p>	Educational attainment.		
	Health status		
	Income level		
	Additional information		
"Outcomes":	How many households benefitted from some of your products and services (Please elaborate on those types of services)?		
	Indicators	Current state	Future state
<p>Changes in the lives of the target population. Common "outcome" indicators include numbers and percentages of people adopting certain behaviours, obtaining certain opportunities, and having access to certain products and services.</p>	Access to electricity.		
	Access to tertiary education		
	Access to equity		
	Additional information		

**“Outputs”:**

The results of the activity in question. Common “output” indicators include numbers of people reached.

<b>How many local people have been employed/SMMEs contracted in the project? Indicate if permanent or temporary employment.</b>		
<b>Indicators</b>	<b>Current state</b>	<b>Future state</b>
<b>Planning</b>		
<b>Manufacturing</b>		
<b>Installation</b>		
<b>Grid connection</b>		
<b>Operation and maintenance</b>		

**“Inputs”:**

The resources necessary to carry out an activity. Since most resources are ultimately valued in financial terms, the most common “input” indicator is money spent.

<b>How much is the budgetary allocation to the SED of this project?</b>		
<b>Indicators</b>	<b>Current state</b>	<b>Future state</b>
Education		
Social and welfare		
Management and planning		
Enterprise development		
Infrastructure		
Unallocated		

## SECTION ONE (2): INFRASTRUCTURAL REQUIREMENTS

Infrastructural Requirements				
Indicator	Description	Demand	Current Status	Gap and means to address
Transport	Road			
	Rail			
	Air			
Water	Volume			
	Location			
	Quality			
Hazardous products:	Volume			
	Rating			
	Disposal			
Communication	Need			
	Source			
	Location			
Human Capital Requirements of Investments	Human Capital			

ANNEXURE  
C

***NEWS***  
***ARTICLES***

NEWS DESK

# Noupoort Wind Farm adds to power grid

19/07/16  
One of Lekela Power's projects, the wind farm adds capacity for about 69 000 households with its 35 newly commissioned turbines

that renewable energy projects benefited nearby communities.

However, so far more than R90m has been committed to developmental initiatives under this programme.

"We are implementing various economic development projects, which include capacity building for existing and prospective entrepreneurs; and local maths and science development programmes that incorporate science and computer labs as well as local Wi-Fi infrastructure," Antoniaelis said.

He said the team at Noupoort Wind Farm had been working closely with the various Eskom teams to achieve the milestone.

He said their project had received resounding support from the local municipality and the surrounding communities who supported them throughout the construction phase.

"For this, we are most grateful. We look forward to a long and mutually beneficial relationship," he said.

The farm is situated in the Unisoobana municipal area located 10km east of Noupoort.

It spans 7500 hectares and comprises 36m-high wind turbines.

He said the site was chosen because of its excellent wind resources and its proximity to national roads for wind turbine transportation.

According to him, it has a straightforward electrical connection to the Eskom grid.

"The studies showed that there would be little environmental impact. When operating at full capacity, the 80MW Noupoort Wind Farm will generate

SMANZA KLAMALO

ABOUT 69 000 people in the country will benefit from the Noupoort Wind Farm in the Northern Cape.

This follows the commissioning of 35 turbines 80MW in the wind farm that have been connected to the Eskom grid yesterday and costing R1,9bn.

It is believed the project has satisfied all of Eskom's requirements.

The farm, in the field of Lesotho Power projects, has achieved its commercial operational date on schedule and on budget, making it the first wind farm to successfully open as part of the third round of the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP).

Country programme manager Serva Antoniaelis said they were thrilled to have reached the milestone on target; and to have met all Eskom's requirements including grid code compliance, thereby achieving the commercial operational date just 17 months after construction commenced.

South Africa's relatively new wind energy sector is already supplying enough electrical energy to power more than half a million households from 15 large wind farms generating more than 3,2TWh of wind energy.

Noupoort Renewable Energy Trust was established by the project company with the objective of carrying out public benefit activities for the local community in the areas of enterprise development, education and health.

He said in addition to the enormous water savings, significant in the country's state of drought, REIPPPP ensures



**POWERFUL:** Noupoort Wind farm has reached the milestone on target and met all Eskom's requirements. [www.escm.co.za](http://www.escm.co.za)

prise development programmes.

Construction of the wind turbine generator foundations started in May 2015, and all 35 turbine foundations were completed by November 20.

The Noupoort Wind Farm is owned by

fossil fuel power plants," he said.

In addition to zero carbon emissions and reduced use of fossil fuels, he said, the country will benefit from minimal water consumption during the generation process and significant social and enter-

around 304-800MWh of clean renewable energy a year. This is expected to supply electricity to power thousands of homes.

The wind farm will effectively eliminate about 300 000 tons of carbon emissions each year when compared to traditional

a commitment and is dedicated to providing clean, renewable energy to the people of South Africa.

Lesotho Power has more than 1300MW renewable power in its portfolio. [www.lesothopower.co.za](http://www.lesothopower.co.za)

## NC solar project wins top award

**PATSY BEANGSTROM**  
NEWS EDITOR

THE SOUTH African National Energy Association has named the ACWA Power SolAfrica Bokpoort CSP plant in the Northern Cape as the Best Energy Project of the Year.

The announcement was made at the SANEA/SANEDI Awards ceremony held in Johannesburg recently.

The 50MW CSP plant in the Northern Cape was considered the industry's pioneering project in the renewable energy sector. The project was also recognised as the industry benchmark for utilising renewable energy deployment for socio-economic development through focused investment in local community development.

According to the company's Chief

Executive Officer and President, Paddy Padmanathan, the award is a recognition of ACWA Power's commitment to the country's REIPPP initiative, bringing to the sector a long-term investor, owner and operator mindset focused on reliably delivering electricity at the lowest possible cost.

"Bokpoort CSP is our first project in South Africa and we are proud to receive a recognition of this magnitude."

The R5 billion project, developed as part of the Renewable Energy Independent Power Producers Programme of the Department of Energy, is the first in Africa consisting of 9.3 hours of thermal storage via molten salt tanks, which allows the plant to feed solar energy into the grid round the clock.

During its first month of commercial operation, in March 2016, Bokpoort CSP

demonstrated this capability when it was called to produce electricity for a continuous period of 161 hours which is equivalent to over six days – a record-breaking performance in Africa.

"We remain committed to making more investments in the power sector in South Africa through the development of several more new projects and will continue to challenge cost through rigour and innovation," Padmanathan said.

Commenting about South Africa's plans for gas-to-power generation, COO for renewables and Southern Africa region Managing Director, Chris Ehlers said ACWA Power was exploring this opportunity based on its significant global experience of investing in and operating natural gas fired combined cycle power plants.

## International investors invited to explore alternative energy

SMANGA KUMALO

THE Northern Cape will host a Renewable Energy Summit later this year which will act as a platform for international investors to invest in alternative energy opportunities in the province.

The province, in partnership with the department of energy, is reviewing the provincial renewable energy to ensure that the strategy makes provision for diversification and creation of industries across sectors.

The government says the renewable energy implementation protocol will be finalised within the 2016-17 financial year.

Zandisile Luphahla, spokesperson for the department of finance, economic development and tourism, said MEC Mark Jack and Premier Sylvia Lucas have committed to addressing youth unemployment and skills development in the province.

The department of energy has also, through the government's Renewable Energy Independent Power Producer Procurement (REIPPP) programme, facilitated the creation of job opportunities for the youth.

Grid connections have emerged as a key challenge for Independent Power Producers (IPPs).

However, Eskom has spent R2.4bn through bid windows one to three on key energy infrastructure to allow for the release of energy from IPPs with an additional R13bn investment needed to unlock capacity for IPPs for the bid windows to follow. "The government has attracted €698.9m (R11.4bn) from the World Bank Group's Multilateral Investment Guarantee Agency, and

\$180m (R2.6bn) from the New Development Bank, which was formed by Brics countries, to support the REIPPP programme," he said.

He said Eskom will be able to add 255km of additional power lines, which will support the transmission of 4665MW of power.

Luphahla said the province is taking advantage of solar resources and will address the energy challenges facing the world and this country.

"Seventeen solar PV plants are commercially operational in the province.

"We host 100% of the concentrated solar power and 65% of the solar PV capacity procured in bid windows 1-4 in REIPPP programmes, thus contributing 2097MW of the national total of 2892MW solar power," he said.

The Northern Cape has attracted 66% of the total REIPPP investments to date and has secured a substantial share of the equity for local communities with benefits materialising over the project life. "Through the department of energy's economic development obligation budget, the IPPs have contributed to the socio-economic development of the communities," Luphahla said.

Various programmes such as a skills development centre, which has 30 laptops and can accommodate up to 30 youths for one session, was a result of IPP contributions. Luphahla said Francois Visser Primary School had a food garden and a bus for transporting children to sports events.

The early child development centre will work with IPPs to ensure Mathematics and Science receive priority in their schools.

*smangak@thenewage.co.za*

TNA: 6 July 2016

## **!Kheis gets Red Flow batteries**

SMANGA KUMALO

!KHEIS local municipality is the first in the region to receive rechargeable batteries from an Australian organisation which introduced the Red Flow battery to South Africa.

The batteries will allow solar panels to last longer in supplying energy to households.

The department of energy provided the municipality with R5m for the project.

Spokesperson for the department of finance, economic development and tourism Zandisile Luphahla said Acwa Power provided funding to supply 160 households with PV solar panels.

"The panels include three lights, a cellphone charger, a radio and a solar system television set which can be used as a monitor. This project has received international recognition and the municipality was invited by the UN Women South Africa Multi-Country Office to participate in a competition relating to the project," he said.

The municipality won \$60 000 (R892 000) which must be applied to develop women's skills in renewable energy, which will lead to permanent job creation. The municipality has also partnered with the NCRFET College in Upington to set up a remote facility where students can obtain accredited training in areas of expertise that will be required to create and maintain a solar powered community.

Luphahla said the facility will assist students to empower themselves with industry specific skills.

He said a Spanish solar company has also donated R250 000 towards the building of a computer centre for mathematics and science which will also be used as a remote facility for local students.

TNA: 7 July 2016

The New Age. Wed, 10/08/2016.

# Energy summit for the province

SMANGA KUMALO

THE province is preparing itself to host a renewable energy summit it hopes will attract international investors, provincial spokesperson Zandisile Luphahla said in a statement yesterday.

The summit is scheduled to take place towards the end of the year.

With the country needing more energy, it is expected that international investors will be lining up to take advantage of this initiative to help set up alternative energy opportunities that is expected to create jobs and grow the economy.

Luphahla said the provincial government was excited about the partnerships as they were important for creating the necessary jobs to help reduce unemployment.

"We are excited that these opportunities will help the province grow jobs and reduce the escalating unemployment rate," Luphahla said

He said the Kheis municipality would host African countries and forge important economic relations with our "peer African countries".

He said plans were afoot to increase



**LET IT SHINE:** Renewable energy summit on the cards.

the solar footprint and increased solar output in the !Kheis municipality.

He said the project would cooperate with the NCR TVET College in Upington to set up a training facility to train students to obtain accredited qualifications to take advantage of the solar programmes, "as we create and develop a solar powered community".

He said the training facility would help students earn industry-specific skills.

Luphahla said the province in partnership with the department of energy was reviewing the provincial renewable energy strategy "to ensure that the it makes provision for diversification and creation of industries across sectors".

The solar company has donated R250 000 towards the building of a computer centre for mathematics and science.

"We are happy with the progress."

*smangak@theneuage.co.za*

# SA company shortlisted for world solar energy project

SELLO RASOPTHATA

THE South African-based renewable energy company, the Phelan Energy Group, has been shortlisted alongside its consortium partner Tenaga Nasional Berhad to develop one of the world's largest photovoltaic (PV) solar facilities.

This is an electrical device that converts the energy of light directly into electricity by the photovoltaic effect, which is a physical and chemical phenomenon.

Based in Abu Dhabi, the Abu Dhabi Water and Electricity Authority (Adwea) 350MW PV project is planned to be one of the largest international PV solar facilities once completed and will be considered a major achievement in the region.

According to Paschal Phelan, founder of the Phelan Energy Group and chairman of its subsidiary Solar Capital - which recently launched the largest solar firm in the southern hemisphere - the Middle East and North Africa region



**SOLAR POWER:** Phelan Energy says it's in a strong position to manage increasingly larger energy projects.

is now one of the most active markets in the renewable energy industry, as a result of its optimal irradiation conditions, solid interconnection plans and availability of land.

He believes that the track record of the Phelan Energy Group, particularly through its subsidiary Solar Capital, in realising large solar projects, puts the company in a strong position to pick up

the bid as part of a larger consortium. "We have been at the forefront of solar innovation since the company's inception 10 years ago and have already successfully delivered large scale solar plants in the very similar desert conditions of De Aar in the Northern Cape," Phelan said that while the project's development would differ in costing (such as tax systems), local content requirements and labour costs that would influence overall construction costs and balance of systems in the two regions, the Phelan Energy Group plans on putting together a strong team to meet the needs and scale of the project.

The Phelan Energy Group formed a consortium with Tenaga Nasional Berhad, the Malaysian utility company that is a leader in generation and distribution with 10,000MW of total installed capacity, and an additional 4,400MW of generating assets under construction. According to the international solar power publication, PV Magazine, this consortium is one of seven shortlisted

consortia for the 350MW Adwea project. Phelan says that Solar Capital has been a preferred bidder for various bid rounds in South Africa's renewable energy independent power producer procurement programmes, where it competed with many of the same companies now bidding in the Abu Dhabi project.

Phelan says that the Phelan Energy Group is a long-term investor in all of its projects, and therefore superior quality is a prerequisite for all of its bids.

"We expect our solar farms to produce 75% to 80% of their peak power in 30 or more years' time, which results in us investing in quality accordingly.

"Past learnings are used in current projects to ensure better integration and faster execution with a key emphasis on quality.

"One key aspect is our dedicated management services division which leads an efficient and quality design group as well as supervising the entire operation to its conclusion", Phelan said.

[sello.raso@tenaga.co.za](mailto:sello.raso@tenaga.co.za)

TNA: 13 July 2016.

# Getting kids to enjoy reading

The government and Droogfontein Solar Power team up to bring reading coach initiative to schools in province

SMANGA KUMALO

THE Northern Cape department of education has initiated a programme called Reading Coach as an intervention to generate a love for reading among primary school children. The programme is funded by Droogfontein Solar Power. Director of the curriculum Basie Mathane said pupils at the end of the foundation phase had only a rudimentary grasp of the principles of reading and writing, which made it very hard for them to overcome obstacles in later years, particularly in mathematics and science.

Evidence suggests that a large number of South African pupils had learning deficits apparent already in the lower grades and that this was the root cause of underperformance in later years.

He said the root of these difficulties points to pupils not mastering the elementary numeracy and literacy skills in the foundation and intermediate phases, leading to them being precluded from further learning and engaging fully with the grade-appropriate curriculum.

The programme aims to intervene with the low levels of reading through the assistance of out-of-school youth in selected foundation and intermediate schools.

Mathane said the department remained committed to working in partnership with Droogfontein Solar Power to improve the reading abilities of pupils and enhance their opportunities to have a better chance of succeeding in life.



**READING COACH:** Droogfontein Solar Power and the department of education join forces to create a love of reading in primary school pupils. PHOTO: MATHANE

Droogfontein plant manager Mpho Makhetha said they were pleased to welcome representatives from the department together with a group of reading coaches as part of their economic development programme and their partnership with education.

It is believed that the programme has already been successfully implemented in all the primary schools in Riverton, Ritchie and Barkley West and has been running smoothly for the last two years. "The focus is to improve literacy and

"The influence and impact of this partnership can only lay a strong foundation for improved outcomes in the participating schools," Makhetha said.

Droogfontein Solar Power has provided jobs for 10 previously unemployed matriculants from the area who now receive a stipend each month and are being provided with work experience to improve their opportunities or to study further.

These coaches run reading sessions

with groups of up to 15 children at a time, although most of these groups are smaller so that each child gets individual attention.

The project is funded over a three-year period and performance will be measured by the improvement of the annual national assessment tests.

It is reported that each participating school will get book grants over the three-year period.

smangak@theancap.co.za

TNA:20 SEPTEMBER 2016

TNA: 16 August 2016



**RENEWABLES:** The first of 61 wind turbines at Loeriesfontein Wind Farm has been lifted into place. PICTURE: TRINEX

## Wind farm lifts first turbine

SMANGA KUMALO

A R3.5BN wind farm build in the Northern Cape is expected to start supplying power to the national grid by the end of 2017.

This will be part of the third round of the Renewable Energy Independent Power Producer Procurement Programme in Loeriesfontein.

Loeriesfontein Wind Farm has announced that it has completed the lifting of the first of its 61 wind turbines.

Project manager Leo Quinn said it was a pivotal point in the construction of the wind farm with the next major construction milestone being the arrival of the main transformer and the energisation of the substation.

The wind turbines which are 100m tall to allow for optimum energy production take a day to erect assuming the weather is favourable and the first two sections of the

towers have been erected.

He said the three 53m blades, made from fibreglass reinforced epoxy, are connected to the rotor at ground level before being lifted to the top of the turbine tower.

"This is a complicated lifting exercise in which one crane raises the assembled rotor whilst another smaller crane and tag-lines guide the rotor into the correct position. The heaviest component is the nacelle, which contains the generator and gearbox and weighs 82.5 tons.

"The process of constructing the turbines requires two cranes to work simultaneously – the lifting of the massive 108m diameter rotor requires great skill and is an impressive manoeuvre to watch," he said.

Siemens Wind Power along with subcontractors Fairwind and BMS are responsible for the installation of the wind turbine generators.

Next year the team will move onto the

turbine lifting for the adjacent Khobab Wind Farm.

"We are pleased to be working with an experienced crew who recently managed the lifting for Noupoort Wind Farm and will later move onto our sister wind farm," Quinn.

"The site was chosen because of its excellent wind resource, its proximity to national roads for transportation, the favourable construction conditions, municipality and local stakeholder support, the straightforward electrical connection into Eskom's Helios substation about 11km south of the site and studies showed that there would be minimal environmental impact," he said.

Quinn said when operating at full capacity, the Loeriesfontein Wind Farm will generate about 563 500MWh of clean renewable energy per year. It is expected to supply electricity to power up to 120 000 homes.

*smangak@thenewage.co.za*

# Wind farm adds to grid

SMANGA KUMALO

THE construction of the wind turbines at the Noupooort wind farm in the Northern Cape has been completed and the project will be in full operation by September.

Spokesperson for the finance, economic development and tourism department Zandisile Luphahla said studies showed that there would be little environmental impact when they were operating at full capacity.

The Noupooort Wind plant will generate about 304 800MWh of clean renewable energy a year and Luphahla said it was expected to supply electricity to power up to 68 000 South African houses.

"The Noupooort wind farm will effectively eliminate about 300 000 tons of carbon emissions each year when compared to traditional fossil fuel power plants. It is part of the South African government's round three Renewable Energy Independent Power Producer Procurement Programme," he said.

"The country's mainstream renewable power will manage both the construction and operations of this wind farm," he said.

In terms of the socio-economic development expenditure, areas falling within a 50km radius will benefit.

"It has introduced maths and science in one of the schools and managed to finance the recruitment of a maths and science teacher at Enoch Mthembiu High School. There will also be an upgrade of the science lab," he said.

The enterprise development has applied for advanced funding from the board of directors to help farmers with input costs, the establishment of a local bakery and the development of entrepreneurial skills.

He said the intervention would establish a skills development centre to transfer business knowledge to the members of the community.

"Stakeholders have quarterly meetings with the municipality in which they report on progress made in terms of socio-economic development expenditure and commitments. Forty-one houses are to be fixed through the roof project and 36 have been completed thus far," he said.

It is believed 300 local people were employed during the construction of the project and of the 27 subcontractors on the database a total of eight local service providers were employed.

Luphahla said the Sishen solar energy facility is a 74MW solar farm that was bid under round 2 of the Department of Energy's Independent Power Procurement Programme.

The power purchase agreement, implementation agreement and direct agreement were executed on May 9, 2014, with a commercial operation date on November 26, 2014.

The project is located within the Gamaqara municipality and there are five beneficiary communities that fall within a 50km radius of the project site which are Dibeeng, Kathu, Dingleton, Ollifantshoek, Wincaaton (Sishen), with Dibeeng being the main focus community.

He said: "The local community benefits through the local community trust which holds a 10% equity stake in the project.

"Since the construction of the project, 3732 jobs were created and this exceeded the job creation target.

"Of the 3732 employed, 60% came from the local community of which 63% people were youths and 6% women.

smangak@thenewscage.co.za

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## Independents to better lives

SMANGA KUMALO

THE Northern Cape department of economic development and tourism has embarked on a tour of the province to assess the impact of independent power producers on communities.

Spokesperson Zandisile Luphahla said the Renewable Energy Independent Power Producers Procurement Programme was not exclusively about power but also the development of communities.

It has to improve social well-being and better the lives of people.

He said the department would seek to better understand the impact and conditions that influenced sustainability of projects by taking stock of the present and future socio-economic benefits that would accrue in the future.

He said they undertook a survey on socio-economic impacts to gauge the

Independent Power Producers (IPPs) contribution to the socio-economic development of the 50km where they operate.

"The IPPs are obliged to adhere to the conditions of their licence to operate by ensuring that they are delivering socio-economic benefits in line with the government's and community expectations. The IPPs are obliged to improve the business enabling environment in informed dialogue with policy makers on government's regulatory frameworks that foster innovation and growth in the renewable energy industry. It is the responsibility of the department to take stock of the IPPs socio-economic impacts on the community," he said.

He said IPPs should operate at full capacity to earn a profit and plan to track community-level socio-economic impact metrics.

smangak@thenewscage.co.za

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