



**CLEAN DEVELOPMENT MECHANISM
PROGRAM ACTIVITY DESIGN DOCUMENT FORM (CDM-CPA-DD)
Version 01**

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Appendix 1: List of Abbreviations

NOTE:

- (i) This form is for the submission of CPAs that apply a large scale methodology using provisions of the proposed PoA.
- (ii) The coordinating/managing entity shall prepare a CDM Programme Activity Design Document (CDM-CPA-DD)^{1,2} that is specified to the proposed PoA by using the provisions stated in the PoA DD. At the time of requesting registration the PoA DD must be accompanied by a CDM-CPA-DD form that has been specified for the proposed PoA, as well as by one completed CDM-CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the PoA must submit a completed CDM-CPA-DD.

¹ The latest version of the template form CDM-CPA-DD is available on the UNFCCC CDM web site in the reference/document section.

² At the time of requesting validation/registration, the coordinating managing entity is required to submit a completed CDM-POA-DD, the PoA specific CDM-CPA-DD, as well as one of such CDM-CPA-DD completed (using a real case).

**SECTION A. General description of CDM programme activity (CPA)****A.1. Title of the CPA:**

CPA 001 under PoA ‘South African Large Scale Grid Connected Solar Park Programme’

Version number: 3.0

Date: 11/12/2012

A.2. Description of the CPA:

This CPA falls under sectorial scope: Energy industries (renewable-/ non renewable sources); Type: Renewable energy; and category: Electricity generation and supply.

The purpose of the CPA is to supply the solar-generated electricity to the grid of the Republic of South Africa (RSA).

CPA 001 envisages the installation of a new grid connected solar park at a site where no solar park was operated prior to the implementation of the CPA.

The installed capacity of the solar park is 25 MW. The solar park will employ photovoltaic (PV) solar panels with a single axis tracking system³. The produced electricity will be supplied to the national grid of the RSA and sold via Government PPA.

The proposed CPA will be located approximately 16 km north-west of the town of Kathu in the Northern Cape Province of the RSA. The CPA is being developed by Lylaserve (Pty) Ltd. The EPC contract is expected to be signed on 01/01/2014, and the commissioned plant is expected to be operational on the 01/01/2015.

Currently the energy system of the RSA is dominated by coal-fired power plants⁴ and is managed by the state-owned company Eskom which is in charge of generation, transmission and distribution of power to end-users.

The greenhouse gas (GHG) emissions from the electricity generation at the solar park will amount to zero. The reduction of GHG emissions as a result of the CPA implementation will be achieved due to reduction of CO₂ emissions from combustion of fossil fuel at the existing grid-connected power plants and plants which would likely be built in the absence of the CPA.

This CPA satisfies all sustainable development goals identified in the CDM-PoA-DD. The main benefits of the implementation of the present CPA are:.

1. Social and economic: Promotion and development of photovoltaic solar parks in the RSA which in turn will lead to the creation of new job opportunities both during the construction and operation phases and to growth in tax revenues. The CPA implementation will lead to creation of up to 400 jobs during the construction phase and 16 jobs during the operation phase . Sales of carbon credits generated by the CPA will result in increased foreign direct investment;
2. Environmental: Mitigation of the negative environmental impact. Combustion of fossil fuels (mostly coal) at Eskom’s power plants and hereby emissions of the harmful substances into the

³ TDD – Tracker Report

⁴ 84.80% of Eskom’s capacity is from coal fired plants, Eskom Annual Report 2010, page 298, http://financialresults.co.za/2010/eskom_ar2010/downloads/eskom_ar2010.pdf



atmosphere, such as flue ash, oxides of sulphur and nitrogen will be reduced due to the implementation of the CPA; and

3. Other: Contribution to achievement of the goal to generate 10,000 GWh of electricity from renewable energy by 2013⁵ and the objective to reduce RSA’s GHG emissions by approximately 34.00% below the current emissions baseline by 2020.⁶

A.3. Entity/individual responsible for CPA:

Lylaserve (Pty) Ltd (Private Entity) is an entity responsible for CPA implementation (Lylaserve (Pty) Ltd is not a project participant of the present PoA).

Lylaserve (Pty) Ltd is a Special Purpose Vehicle (SPV) established to operate and manage solar parks in the RSA.

The Coordinating and Managing Entity (CME) of this programme is Blue World Carbon Asset Management (Pty) Ltd (BWC). BWC will act as a carbon consultant to develop all necessary CDM documentation, facilitate CPA inclusion, monitor the present CPA, and sell CERs in the international market. BWC receives a fee for their services.

The CME and Lylaserve (Pty) Ltd have agreed that the 25 MW solar park project will be listed under the present PoA.

A.4. Technical description of the CPA:

This CPA falls under sectorial scope: Energy industries (renewable-/ non renewable sources); Type: Renewable energy; and category: Electricity generation and supply.

CPA 001 envisages the installation of a new grid connected solar park at a site where no solar park was operated prior to the implementation of the CPA.

A PV solar park consists of several arrays of photovoltaic panels connected with each other to produce electricity. The term photovoltaic describes a solid-state electronic cell that produces direct current electrical energy from the radiant energy of the sun. "Photo" refers to light and "voltaic" to voltage. Solar cells are made of semi-conducting material, most commonly silicon, coated with special additives. When light strikes the cell, electrons are knocked loose from the silicon atoms and flows in a built-in circuit, producing electricity. If a load is connected under these conditions, an electrical current will result, which is capable of doing work. The current produced is proportional to the amount of light absorbed by the device. In a solar cell the photovoltaic effect is manifested as the generation of voltage at its terminals while being struck by the sun’s rays. A solar panel is a packaged interconnected assembly of photovoltaic cells. The solar panels are oriented towards the sun, by using a tracking system, to minimize the angle of incidence between incoming light and the solar panel. JKM295P-72 polycrystalline modules supplied by Jinko Solar will be employed for the proposed CPA. The JKM295P-72 specification is given in the following table:

Parameter	Unit	Value
Maximum Power at STC (P_{max})	Wp	295

⁵ http://www.energy.gov.za/files/renewables_frame.html

⁶ <http://www.unep.org/climatepledges/Default.aspx?pid=68>



Maximum Power Voltage (V_{mp})	V	38.6
Maximum Power Current (I_{mp})	A	8.02
Open-circuit Voltage (V_{oc})	V	45.2
Open-circuit Current (I_{sc})	A	8.95
Module Efficiency	%	15.20

The amount of electricity which is produced by the PV panel is dependent on the irradiation intensity at the site. The present CPA generates 25 MW and annually produces an average of 66,395 MWh⁷ of electricity. Since the energy output decreases every year (due to degradation), it is not realistic to provide a plant load factor. The generated renewable electricity is then distributed to the national grid of the RSA.

A.4.1. Identification of the CPA:

CPA 001 (under the South African Large Scale Grid Connected Solar Park Programme)

A.4.1.1. Host Party:

The Republic of South Africa (RSA)

A.4.1.2. Geographic reference of other means of identification allowing the unique identification of the CPA (maximum one page):

The solar park is sited on the southern part of Portion 6 of the Farm Wincanton 472, which lies approximately 16 km north-west of the town of Kathu and 5 km east of the small township of Dibeng in the Northern Cape Province.

The GPS co-ordinates of the location are -27.5975 latitude and 22.9372 E longitude and it falls in the UTC+2:00 time zone.⁸

Figure A.4-1 shows the location of CPA 001 with respect to the RSA, Figure A.4-2 shows the location of the CPA site.

⁷ This is an average over the first 10 year estimation period, taking into account a yearly degradation of approximately 0.8%. (Annexure 18 and 19)

⁸ See Eligibility criteria 2 in Table B.2-1



Figure A.4-1: CPA location within the RSA

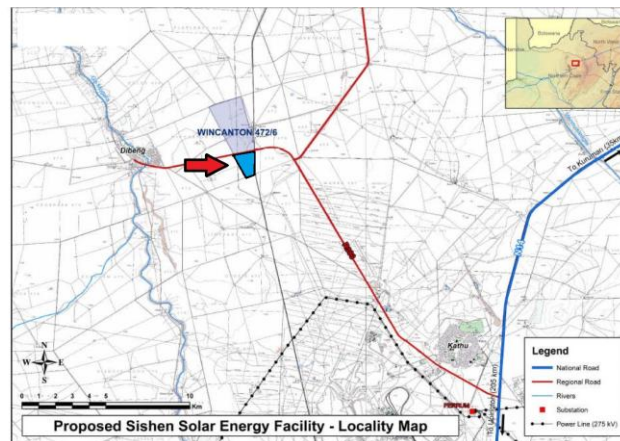


Figure A-2. Location of the CPA site

The CME concludes that the CPA is located in the RSA and that the project has received an environmental authorisation from the Department of Environmental Affairs and a Letter of Approval from the DNA .

A.4.2. Duration of the CPA:

A.4.2.1. Starting date of the CPA:

01/01/2014 (expected signing the EPC contract)⁹

A.4.2.2. Expected operational lifetime of the CPA:

25 years, 0 months (Annexure 3)¹⁰

A.4.3. Choice of the crediting period and related information:

Fixed crediting period

A.4.3.1. Starting date of the crediting period:

01/01/2015 or the date of inclusion of the CPA in the PoA; whichever is later.

A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP:

10 year

⁹ See Eligibility criteria 2 in Table B.2-1

¹⁰ EU: Study on PV panels supplementing the impact assessment for a recast of the WEEE directive, Final report, 14/04/2011 <http://ec.europa.eu/environment/waste/weee/pdf/Study%20on%20PVs%20Bio%20final.pdf> on page 6, paragraph 3



A.4.4. Estimated amount of emission reductions over the chosen crediting period:

Years	Annual estimation of emission reductions in tonnes of CO ₂ e
2015 (From 01/01/2015 to 31/12/2015) ¹¹	68,046
2016	67,512
2017	66,957
2018	66,413
2019	65,868
2020	65,324
2021	64,780
2022	64,235
2023	63,691
2024	63,147
Total estimated reductions (tonnes of CO₂ e)	655,973
Total number of crediting years	10
Annual average over the crediting period of estimated reductions (tonnes of CO₂ e)	65,597

A.4.5. Public funding of the CPA:

No public funding will be applied to the CPA¹². The declaration from the CPA was received (**Annexure 4**).

A.4.6. Confirmation that CPA is neither registered as an individual CDM project activity nor is part of another Registered PoA:

CPA 001 is not registered as an individual CDM project activity or as part of another registered PoA¹³. Signed declarations from the owner of the CPA and the CME were received.

¹¹ Full calendar year

¹² See section B.2 – eligibility criterion 11.

¹³ See section B.2 – eligibility criterion 3 and 4.



SECTION B. Eligibility of CPA and Estimation of emissions reductions

B.1. Title and reference of the Registered PoA to which CPA is added:

Title of the registered PoA: South African Grid Connected Solar Park Programme¹⁴

Version number: 3.0

Date: 11/12/2012

B.2. Justification of the why the CPA is eligible to be included in the Registered PoA :

Compliance with the eligibility criteria according to the CDM-PoA-DD are demonstrated in Table B.2-1.

Table B.2-1: Compliance with Eligibility criteria (also refer to Table A.4-1 in CDM-PoA-DD)

PoA Eligibility criteria (Table A.4-1 in CDM-PoA-DD)	Compliance with eligibility criteria/ Mean of proof	Supporting document
1. The CPA is in the geographical area of the Republic of South Africa (RSA).	The solar park is sited on the southern part of Portion 6 of the Farm Wincanton 472, which lies approximately 16 km north-west of the town of Kathu in the Northern Cape Province.	Environmental Authorization (EA) from the relevant Competent Authority (CA) of the RSA ¹⁵ dated 03/10/2011. And a Letter of Approval from the DNA of the RSA dated 31/10/2012.
2. The location of the CPA is uniquely identified by the GPS coordinates. The GPS coordinates has been crosschecked with previous records of GPS coordinates of existing CPAs under this PoA to ensure that no overlap between activities can occur.	The GPS coordinates are given in section A.4.1.2. Since this is the first CPA in this PoA, there are no other CPA's to crosscheck against and therefore no overlap occurs.	Environmental Authorization (EA) from the relevant Competent Authority (CA) of the RSA dated 03/10/2011 , Final EIA and declaration from BWC dated 29/10/2012.
3. The CPA owner has contractually agreed and signed the following: a) The CPA has neither been and will not be registered as a CDM project activity, nor as a CPA under another PoA; and b) The owner is aware that the activity will be subscribed to the present PoA.	The CPA owner has contractually agreed that the CPA has neither been and will not be registered as a CDM project activity, nor as a CPA under another PoA; and that he is aware that the activity will be subscribed to the present PoA.	Signed declaration from the CPA owner dated 10/12/2012.

¹⁴ hereinafter “the PoA”

¹⁵ The Department of Environmental Affairs at the time of CPA-DD drafting



<p>4. The CME has checked the UNFCCC CDM project database to verify that the proposed CPA has not been previously submitted to the UNFCCC. If the CPA has been submitted to the UNFCCC for validation or registration, the CPA developer has to prove that the process of validation or registration has been withdrawn.</p>	<p>The CME has checked the UNFCCC CDM project database to verify that the proposed CPA has not been previously submitted to the UNFCCC.</p>	<p>Signed declaration from the CME dated 29/10/2012.</p>
<p>5. The CPA is one of the following:</p> <ul style="list-style-type: none"> a) The installation of a new grid connected solar park at a site where no solar park was operated prior to the implementation of the CPA; or b) The capacity addition of an existing grid connected solar park, herewith the electricity generation at existing solar park should not be affected by the CPA. 	<p>The CPA is the installation of a new grid connected solar park at a site where no solar park was operated prior to the implementation of the CPA.</p>	<p>The Final_EIA (01/2011)</p>
<p>6. The CPA is connected to the national grid of the RSA via either:</p> <ul style="list-style-type: none"> a) The national transmission, distribution or reticulation lines;¹⁶ or b) A municipal electricity network that is connected to the national transmission, distribution or reticulation lines. 	<p>The CPA will be connected to the national grid of the RSA via the national transmission, distribution or reticulation lines.</p>	<p>Draft PPA and declaration from the CPA developer</p>

¹⁶ 'Eskom grid' at the time of drafting of the PoA-DD



<p>7. The start date of the CPA is clearly defined in the CPA-DD with supporting documentary evidence and is later than the date of start of global stakeholder process for the PoA (05/04/2012).</p>	<p>The start date of the CPA is given in section A.4.2.1 as 01/01/2014, the expected start date of construction, which is later than 05/04/2012.</p>	<p>Signed declaration from the CPA implementer . Project has not yet started as the Purchase order is yet to be released.</p>
<p>8. The CPA is in line with applicability conditions of ACM0002</p>	<p>The CPA satisfied the applicability conditions of ACM0002.</p>	<p>Signed declaration from CME</p>
<p>9. Additionality was demonstrated individually for the CPA according to the procedures described in the Section E.5.1 of the CDM-CPA-DD.</p>	<p>Additionality was demonstrated for CPA 001 by means First-of-its-kind in section B.3 of this CPA-DD.</p>	<p>The list of power plant servicing the grid and their capacity.</p>
<p>10. The environmental impact assessment required by the NEMA¹⁷ regulations and CDM local stakeholder consultations has been completed.</p>	<p>An EIA was made in 01/2011, and a stakeholder meeting was held on 27/03/2012 where comments were received and recorded.</p>	<p>Environmental Authorization (EA) from the relevant Competent Authority (CA) of the RSA¹⁸ dated 03/10/2011. Photo copy of newspaper where invitation was published, copies of invitation sent to local stakeholders, minutes of the meeting, list of attendance, list of comments received</p>
<p>11. No official Development Aid will be involved or diverted as a result of the CPA. The official declaration of ‘no development aid’ has been provided by the solar park developer. If Annex 1 countries are involved, then a declaration from the concerned agency in Annex 1 country should also be submitted.</p>	<p>This criterion is met by the signed declaration.</p>	<p>Signed declaration from the CPA owner dated 10/12/2012</p>
<p>12. In case the CPA involves capacity addition to an existing solar park, it does not affect the radiation received by the existing power plant and the electricity fed into the grid by the added power plant addition is separately metered.</p>	<p>This CPA does not involve capacity addition and therefore does not need to meet this eligibility criterion.</p>	<p>Not applicable</p>

¹⁷ NEMA: National Environmental Management Act

¹⁸ The Department of Environmental Affairs at the time of CPA-DD drafting



13. The owner of the CPA is duly registered/incorporated entity of the RSA.	13. Company incorporation certificate issued by Registrar of Companies.	Company registration certificate
14. A CME has checked that the CPA satisfies the eligibility criteria of the latest version of the PoA-DD. ¹⁹	14. The CME has checked that the CPA satisfies all of the applicable eligibility criteria.	Signed declaration from the CME dated 29/10/2012.

[Reference] Eligibility #5 & #6: Applicability

The proposed CPA will be a grid-connected renewable power generation project and is applicable to ACM0002 since it falls under:

- (a) Installation of a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity(greenfield plant);

Moreover the CPA meets all necessary applicability conditions of the ACM0002 methodology as listed in Table B.2-2 below.

Table B.2-2: Applicability conditions for ACM0002

Applicability condition	Applicability	Reasoning
The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	Applicable	The CPA involves the installation of a solar power plant (refer to eligibility criterion 5).
In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;	Not Applicable	This condition does not apply to the proposed CPA. The proposed CPA is Greenfield project.

¹⁹ Additional criterion identified by the CME



Applicability condition	Applicability	Reasoning
<p>In case of hydro power plants, at least one of the following conditions must apply:</p> <ul style="list-style-type: none"> • The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or • The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity; or <p>(i) The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity</p>	<p>Not applicable</p>	<p>The CPA involves solar power and therefore it does not need to satisfy this applicability condition.</p>



Applicability condition	Applicability	Reasoning
<p>In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m² after the implementation of the project activity all of the following conditions must apply:</p> <ul style="list-style-type: none"> • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m²; • All reservoirs and hydro power plants are located at the same river and where are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant; • The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity; • The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m², is lower than 15MW; • The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m², is less than 10% of the total installed capacity of the project activity from multiple reservoirs. 	<p>Not applicable</p>	<p>The CPA involves solar power and therefore it does not need to satisfy this applicability condition.</p>
<p>Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site.</p>	<p>Not applicable</p>	<p>Switching from fossil fuels to Renewable Energy is not allowed under this PoA. (According to the ACM0002, the CPA must not satisfy this applicability condition.)</p>
<p>Biomass fired power plants.</p>	<p>Not applicable</p>	<p>Biomass fired power plants are not eligible for a CPA under this PoA. (According to the ACM0002, the CPA must not satisfy this applicability condition.)</p>



Applicability condition	Applicability	Reasoning
Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the reservoir is less than 4 W/m ² .	Not applicable	Hydro power plants are not eligible for a CPA under this PoA. (According to the ACM0002, the CPA must not satisfy this applicability condition.)
In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”	Applicable	This condition does not apply to the proposed CPA. The proposed CPA is Greenfield project.

CPA 001 is eligible to the PoA because it complies with the eligibility criteria as defined in section A.4.2.2 of the CDM-PoA-DD.

B.3. Assessment and demonstration of additionality of the CPA, as per eligibility criteria listed in the Registered PoA:

The additionality of the CPA is demonstrated and assessed using the “Tool for the demonstration and assessment of additionality” (Version 07.0.0), from EB 70, Annex 08²⁰ (hereinafter in Section B.3. referred to as ‘the Additionality Tool’).

Prior consideration of the CDM

Since this is the first CPA, the date of publishing the PoA for global stakeholder consultation also serves as the date of submission of CPA 001. Since the expected starting date of the CPA 001 (01/01/2014) is later than the date of publishing the CPA & PoA for global stakeholder consultation (05/04/2012), demonstration of prior consideration is not required.

The additionality of the CPA is demonstrated and assessed using the procedures described in section E.5.1 of the PoA-DD.

The project participant demonstrates that the project is first-of-its-kind according to Step 0 in the “Tool for the demonstration and assessment of additionality” (Version 07.0.0), Annex 08 from EB 70²¹ as follows²²:

²⁰ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools> (this version of the tool will be applied throughout the document.)

²¹ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools> (this version of the tool will be applied throughout the document.)

²² The additionality test was updated during the validation process after new version of “Tool for the demonstration and assessment of additionality” (version 07.0.0) was approved by EB. The webhosted version of CPA-DD stressed on investment analysis (step 2), whereas the current version demonstrates that CPA is first-of-its-kind (step 0). This is appropriate, since as per version 07.0.0, the project participant is not required to proceed to further steps if the CPA is first-of-its-kind.

**Step 0: Demonstration whether the proposed project activity is the first-of-its-kind**

Project participant demonstrates that this project is first-of-its-kind according to the definition provided in the “Guidelines on additionality of first-of-its-kind project activities” (Version 02.0)²³ Annex 7, EB69, (hereinafter in Section B.3 referred to as ‘the Guidelines’). According to paragraph 2(b) of the Guidelines, this CPA falls under “power generation based on renewable energy”.

The CPA will be first-of-its-kind as per the paragraph 5 of the Guidelines if:

- (a) The CPA is the first in the applicable geographical area (RSA) that applies a technology that is different from technologies that are implemented by any other project, which are able to deliver the same output and have started commercial operation in the applicable geographical area (RSA) before the CPA is published for global stakeholder consultation or before the start date of the proposed CPA, whichever is earlier;
- (b) The project implements one or more of the measures (this criterion will be satisfied for all CPAs under this PoA since they apply “power generation based on renewable energy”);
- (c) The project participants selected a crediting period for the CPA that is “a maximum of 10 years with no option of renewal”.

As per paragraph 4: *Different technologies are technologies that deliver the same output and differ by at least one of the following (as appropriate in the context of the measure applied in the proposed clean development mechanism (CDM) project activity and applicable geographical area):*

- (a) *Energy source/fuel (example: energy generation by different energy sources such as wind and hydro and different types of fuels such as biomass and natural gas);*
- (b) *Feed stock (example: production of fuel ethanol from different feed stocks such as sugar cane and starch, production of cement with varying percentage of alternative fuels or less carbon-intensive fuels);*
- (c) *Size of installation (power capacity)/energy savings:*
 - (i) *Micro (as defined in paragraph 24 of decision 2/CMP.5 and paragraph 39 of decision 3/CMP.6);*
 - (ii) *Small (as defined in paragraph 28 of decision 1/CMP.2);*
 - (iii) *Large.*

The characteristic of this CPA are:

1. **Technology:** PV solar electrical system.
 - **Energy source:** Energy generation by solar radiation
 - **Size of installation:** Large
2. **Output:** Electricity to be supplied to the national grid.
3. **Geographical area:** The applicable geographical area for this project is Republic of South Africa
4. **Measure:** Power generation based on renewable energy
5. **Project start date:** 01/01/2014

²³ http://cdm.unfccc.int/Reference/Guidclarif/meth/meth_guid43.pdf



6. **Date of start of GSC:** 05/04/2012

7. **Crediting Period:** A crediting period of 10 years with no option of renewal will be used

Therefore, activities similar to the proposed CPA should be a solar park which uses PV solar electrical system and supply electricity to the national grid of the RSA. The project activity should be based in the Republic of South Africa with an installed capacity more than 15 MW, and it needs to have started commercial operation before 05/04/2012.

The list of power plant servicing the grid and their capacity is presented in Appendix to Eskom Integrated report as available on 31/03/2012²⁴. As can be seen there is no power plants similar to the proposed project activity which started commercial operation before 05/04/2012. The proposed project is first-of-its-kind and therefore is additional.

B.4. Description of the sources and gases included in the project boundary and proof that the CPA is located within the geographical boundary of the registered PoA.

The spatial extent of the CPA boundary includes the proposed renewable energy power plant(s) and all power plants physically connected to the grid of the Republic of South Africa.

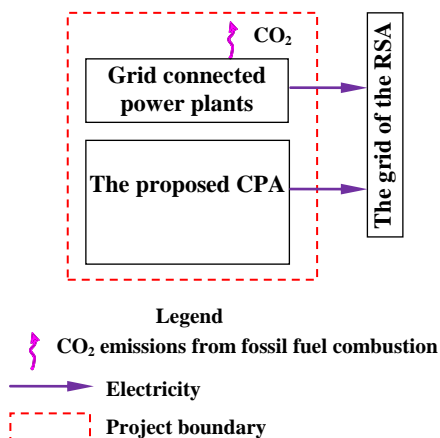


Figure B.4-1: CPA boundary

The greenhouse gases and emission sources that are included in or excluded from the CPA boundary are shown in Table B.4-1.

²⁴ Appendix to Eskom Integrated report, Divisional Report, Power station commercial capacities, download file situated under “Excel downloads”, http://financialresults.co.za/2012/eskom_ar2012/integrated-report/popup-downloads.php



Table B.4-1: Emissions sources included in or excluded from the CPA boundary

<u>Source</u>		<u>Gas</u>	<u>Included</u>	<u>Justification / Explanation</u>
Baseline	CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the CPA	CO ₂	Yes	Main emission source
		CH ₄	No	Minor emission sources, which are not included in the baseline
		N ₂ O	No	
CPA	GHG emissions from the proposed CPA	CO ₂	No	GHG emissions for solar power generation projects are equal to zero.
		CH ₄	No	
		N ₂ O	No	

CPA 001 is located within the boundaries of the Republic of South Africa as shown in Section A.4.1.2.

B.5. Emission reductions:

B.5.1. Data and parameters that are available at validation:

CPAs shall always apply the fixed parameters of the latest version of the PoA-DD. The following parameters are fixed for this CPAs during the first crediting period of the PoA:²⁵

Data / Parameter:	$EG_{m,y}$
Data unit:	MWh
Description:	Net quantity of electricity generated and delivered to the grid by power unit m in year y
Source of data used:	Eskom's statistic data
Value applied:	See Annex 3-3 of the PoA-DD
Justification of the choice of data or description of measurement methods and procedures actually applied :	Official statistics, publicly available and reliable data source
Any comment:	The data for the three most recent reporting years is provided.

Data / Parameter:	$FC_{i,m,y}$
Data unit:	mass or volume unit
Description:	Amount of fossil fuel type i consumed by power unit m in year y
Source of data used:	Eskom's statistic data
Value applied:	See Annex 3-3 of the PoA-DD
Justification of the choice of data or description of	Official statistics, publicly available and reliable data source

²⁵ http://cdm.unfccc.int/EB/032/eb32_repan39.pdf



measurement methods and procedures actually applied :	
Any comment:	The data for the three most recent reporting years is provided.

Data / Parameter:	$NCV_{coal,y}$
Data unit:	GJ/t
Description:	Net calorific value of Other Bituminous Coal
Source of data used:	2006 IPCC Guidelines for National GHG Inventories, volume 2: Energy, chapter 1, Table 1.2
Value applied:	19.9
Justification of the choice of data or description of measurement methods and procedures actually applied :	For the sake of a conservative approach the IPCC default value at the lower limit of the uncertainty at a 95.00% confidence interval is used.
Any comment:	This value was appointed as a constant for the first crediting period of the CPA.

Data / Parameter:	$EF_{CO_2,coal,y}$
Data unit:	tCO ₂ /GJ
Description:	CO ₂ emission factor of Other Bituminous Coal
Source of data used:	2006 IPCC Guidelines for National GHG Inventories, volume 2: Energy, chapter 1, Table 1.4
Value applied:	0.0895
Justification of the choice of data or description of measurement methods and procedures actually applied :	For the sake of a conservative approach the IPCC default value at the lower limit of the uncertainty at a 95.00% confidence interval is used.
Any comment:	This value was appointed as a constant for the first crediting period of the CPA.

Data / Parameter:	$EF_{CO_2,NG,y}$
Data unit:	tCO ₂ /GJ
Description:	CO ₂ emission factor of Natural Gas
Source of data used:	2006 IPCC Guidelines for National GHG Inventories, volume 2: Energy, chapter 1, Table 1.4
Value applied:	0.0543
Justification of the choice of data or description of measurement methods and procedures actually applied :	For the sake of a conservative approach the IPCC default value at the lower limit of the uncertainty at a 95.00% confidence interval is used.



applied :	
Any comment:	This value was appointed as a constant for the first crediting period of the CPA.

Data / Parameter:	η_{OCGT}
Data unit:	ratio
Description:	Average net energy conversion efficiency of open cycle gas turbine power plant
Source of data used:	Tool to calculate the emission factor for an electricity system, Annex 1 the first Table
Value applied:	0.395
Justification of the choice of data or description of measurement methods and procedures actually applied :	Default value is used
Any comment:	This value was appointed as a constant for the first crediting period of the CPA.

Data / Parameter:	$\eta_{m,y}$
Data unit:	ratio
Description:	Average net energy conversion efficiency of coal fired power plant that has operated for more than 10 years for calculation of the Build Margin.
Source of data used:	Tool to calculate the emission factor for an electricity system, Annex 1 the first Table
Value applied:	0.37
Justification of the choice of data or description of measurement methods and procedures actually applied :	Default value is used
Any comment:	This value was appointed as a constant to Majuba and Kendal power plants for the calculation of build margin CO ₂ emission factor (refer to Annex 3-5 of the PoA-DD).

Data / Parameter:	$EG_{n,y}$
Data unit:	MWh
Description:	Net quantity of electricity generated and delivered to the grid by power unit n in year y
Source of data used:	Eskom's statistic data
Value applied:	See Annex 3-4 of the PoA-DD
Justification of the choice of data or description of measurement methods and procedures actually	Official statistics, publicly available and reliable data source



applied :	
Any comment:	The data for 2010 reporting year is provided (the most recent data at the time of start of PoA validation).

Data / Parameter:	$FC_{i,n,y}$
Data unit:	mass or volume unit
Description:	Amount of fossil fuel type <i>i</i> consumed by power unit <i>n</i> in year <i>y</i>
Source of data used:	Eskom's statistic data
Value applied:	See Annex 3-4 of the PoA-DD
Justification of the choice of data or description of measurement methods and procedures actually applied :	Official statistics, publicly available and reliable data source
Any comment:	The data for 2010 reporting year is provided (the most recent data at the time of start of PoA validation).

Data / Parameter:	$EF_{grid,CM}$
Data unit:	tCO ₂ /MWh
Description:	Combined margin CO ₂ emission factor for grid connected power generation calculated ex ante
Source of data used:	CDM-PoA-DD
Value applied:	0.988
Justification of the choice of data or description of measurement methods and procedures actually applied :	Calculated <i>ex ante</i> based on the “Tool to calculate the emission factor for an electricity system” (Version 03.0.0), from EB 70, Annex 22 ²⁶
Any comment:	This value was appointed as a constant for the first crediting period.

Data / Parameter:	P_y
Data unit:	MW
Description:	Power capacity of the CPA in year <i>y</i>
Source of data used:	Solar park developer
Value applied:	25
Justification of the choice of data or description of measurement methods and procedures actually applied :	Evaluated by the solar park developer

²⁶ <http://cdm.unfccc.int/methodologies/PAMethodologies/tools> (this version of the tool will be applied throughout the document.)



applied :	
Any comment:	The value reflects the expected maximum power output of the CPA.

B.5.2. Ex-ante calculation of emission reductions:

The total emission reductions of the CPA are calculated on the basis of the equations and parameters presented and explained in Section E.6 of the PoA-DD and B.5.1 of this document.

Emission reduction calculation

Emission reductions in year y are calculated as follows:

$$ER_y = BE_y - PE_y \quad (E.5-1)$$

Where:

ER_y = Emission reductions in year y (tCO₂e/yr)

BE_y = Baseline emissions in year y (tCO₂/yr)

PE_y = CPA emissions in year y (tCO₂e/yr)

Or

$$ER_y = EG_{CPA,y} \times EF_{grid,CM} - \sum_i FC_{i,y} \times NCV_{i,y} \times EF_{CO_2,i,y} \quad (E.5-2)$$

Where:

ER_y = Emission reductions in year y (tCO₂e/yr)

$FC_{i,y}$ = The quantity of fuel type i combusted during the year y (mass or volume unit/yr)

$NCV_{i,y}$ = The weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)

i = The fuel types combusted during the year y

$EF_{CO_2,i,y}$ = The weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)

$EG_{CPA,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CPA in year y (MWh/yr)

$EF_{grid,CM}$ = Combined margin CO₂ emission factor for grid connected power generation calculated ex ante (tCO₂/MWh)

Since the proposed CPA employs PV technology, no on-site auxiliary fossil fuel consumption will take place and $FC_{i,y}$ is equal to zero, thus the formula (B.5-1) will be transformed into:

$$ER_y = EG_{CPA,y} \times EF_{grid,CM} \quad (B.5-3)$$

Where:



- ER_y = Emission reductions in year y (tCO₂e/yr)
- $EG_{CPA,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CPA in year y (MWh)
- $EF_{grid,CM}$ = Combined margin CO₂ emission factor for grid connected power generation calculated ex ante (tCO₂/MWh)

Combined margin CO₂ emission factor for grid connected power generation calculated ex ante is fixed for all CPAs of the PoA (see Section E.6 of the PoA-DD) and equal to 0.988 tCO₂/MWh.

The summary of the ex-ante estimation of emission reductions is presented in Table below:

Year	$EG_{facility,y}$ (MWh/a)	PE_y (tCO ₂ /yr)	BE_y (tCO ₂ /yr)	ER_y (tCO ₂ /yr)
2015 (From 01/01/2015 to 31/12/2015)	68,873	0	68,046	68,046
2016	68,332	0	67,512	67,512
2017	67,771	0	66,957	66,957
2018	67,220	0	66,413	66,413
2019	66,669	0	65,868	65,868
2020	66,118	0	65,324	65,324
2021	65,567	0	64,780	64,780
2022	65,016	0	64,235	64,235
2023	64,465	0	63,691	63,691
2024	63,914	0	63,147	63,147

The amount of electricity which is produced by the solar park was determined based on the irradiation intensity of the site by Acciona and independently verified by GL Garrad Hassan for the installed capacity of 75 MW. Since the present CPA generates 25 MW, the annually net electricity generation was adjusted accordingly by multiplying $EG_{facility,y}$ calculated for 75 MW by correction factor (25/75).

The yearly yield of the solar park degrades by approximately 0.8% each year

B.5.3. Summary of the ex-ante estimation of emission reductions:

Year	Estimation of project emissions (tonnes of CO ₂ e)	Estimation of baseline emissions (tonnes of CO ₂ e)	Estimation of leakage (tonnes of CO ₂ e)	Estimation of overall emission reductions (tonnes of CO ₂ e)
2015 (From 01/01/2015 to 31/12/2015)	0	68,046	0	68,046



2016	0	67,512	0	67,512
2017	0	66,957	0	66,957
2018	0	66,413	0	66,413
2019	0	65,868	0	65,868
2020	0	65,324	0	65,324
2021	0	64,780	0	64,780
2022	0	64,235	0	64,235
2023	0	63,691	0	63,691
2024	0	63,147	0	63,147
Total (tonnes of CO ₂ e)	0	655,973	0	655,973

B.6. Application of the monitoring methodology and description of the monitoring plan:

B.6.1. Description of the monitoring plan:

The monitoring plan of CPA 001 is devised as per approved consolidated baseline and monitoring methodology ACM0002 (Version 12.3.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”²⁷.

For the sake of clarification on the operational and management structure also refer to The Management System for the South African Large Scale Grid Connected Solar Park Programme (Version 02) and Section A.4.4.1 and E.7.2.1 of the PoA-DD.

The following monitoring procedures shall be applied:

1. Monitoring period

The monitoring period starts from the date of commissioning of the CPA or the date of registration of the proposed CPA under the PoA (whichever is later).

2. Data monitored and sources

The CME will measure data and parameters as per identified parameters in the CPA like the quantity of net electricity generation that is produced and fed into the grid by the CPA in year y.

The quantity of net electricity generation that is produced and fed into the grid by the CPA in year y shall be determined on the basis of electricity meters. The generated electricity will be continuously measured and recorded at least on a monthly basis by the CPA personnel. The metering instruments shall be installed in accordance with the requirements of the Grid and the Distribution Metering Codes at the point of supply which defines the commercial boundary between the solar park owner and the grid (refer to Section 4 of SANS 474. Metering requirements, pages 4-7). The export electricity meter will be equipped with the check meter. Readings of the electricity meters shall be cross-checked with records for sold/purchased electricity. Data on electricity supply will be digitally archived and submitted to the CME.

²⁷ <http://cdm.unfccc.int/methodologies/PAmethodologies/approved> (this version of the methodology will be applied throughout the document.)



The sources of data for calculation of GHG emission reductions in the course of monitoring shall be the internal electricity billing reports of the solar parks.

3. The monitoring team

The solar park staff shall undergo the necessary training related to operation and maintenance of the solar park and all of the installed equipment²⁸

. The maintenance personnel of the solar park are responsible for daily control over the monitoring plan implementation.

The Chief Engineer of the solar park is responsible for timely calibration of all instrumentation in accordance with the manufacturer's requirements and requirements of the South African Bureau of Standards²⁹. The respective CPA entity will be responsible for implementation and overall control as well as collection of all data, and submit the data to the CME on a monthly basis.

Specialists of BWC will calculate GHG emission reductions with data that will be provided by the respective CPA entity.

In case of any doubts as to the accuracy of the data, the specialists of the respective CPA entity shall check and correct the data. The preliminary version of the monitoring report shall be submitted to the specialists of respective CPA entities for review. In case any mistakes are found in the calculations of GHG emission reductions, the specialists of BWC shall correct these calculations accordingly.

Specialists of BWC shall regularly (at least annually) carry out "test verifications" with a view to ensure that the monitoring plan of the respective CPA entity is applied correctly.

4. Data storage

All data collected as part of monitoring plan should be archived electronically and be kept at least for 2 years after the end of the crediting period.

5. Instrumentation calibration

The instrumentation calibration and check-out shall be carried out by contracted specialized organisations that are licenced for this type of activity, according to the requirements of the manufacturing company, and the South African Bureau of Standards (SABS).

6. Emergency situations

If any instrument that is used in the monitoring process fails, the respective CPA entity shall remedy the situation as soon as possible and if necessary shall replace the instrument. Electricity meter will be equipped with the check meter. In case of failure of main meter the reading of check meter will be used. In case both meters (main and check) fail net electricity generation will not be accounted for which is conservative. In case of breakdown of any vital electricity generation equipment the electricity generation will go down, and amount of electricity supplied to the grid by the solar park will be reduced. All accidents that may occur at the solar park shall be recorded by the respective CPA entity. Information on major accidents shall be included in the monitoring report.

The parameter to be monitored is:

²⁸ The CME shall facilitate training for CPA management and personnel to ensure that that monitoring and data capture is done in accordance with this PoA.

²⁹ According to the SABS the SANS 474 regulation should be followed.



Data / Parameter:	$EG_{CPA,y}$																						
Data unit:	MWh																						
Description:	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CPA in year y																						
Source of data to be used:	On-site measurement by electricity meters, yielding the net electricity supplied to the grid of the RSA. Readings are cross-checked with records for sold/purchased electricity. Data from electricity meters are transferred to a metering database.																						
Value of data:	<table border="1"> <thead> <tr> <th>Year</th> <th>$EG_{facility,y}$ (MWh/a)</th> </tr> </thead> <tbody> <tr> <td>2015 (From 01/01/2015 to 31/12/2015)</td> <td>68,873</td> </tr> <tr> <td>2016</td> <td>68,332</td> </tr> <tr> <td>2017</td> <td>67,771</td> </tr> <tr> <td>2018</td> <td>67,220</td> </tr> <tr> <td>2019</td> <td>66,669</td> </tr> <tr> <td>2020</td> <td>66,118</td> </tr> <tr> <td>2021</td> <td>65,567</td> </tr> <tr> <td>2022</td> <td>65,016</td> </tr> <tr> <td>2023</td> <td>64,465</td> </tr> <tr> <td>2024</td> <td>63,914</td> </tr> </tbody> </table>	Year	$EG_{facility,y}$ (MWh/a)	2015 (From 01/01/2015 to 31/12/2015)	68,873	2016	68,332	2017	67,771	2018	67,220	2019	66,669	2020	66,118	2021	65,567	2022	65,016	2023	64,465	2024	63,914
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2020	66,118																						
2021	65,567																						
2022	65,016																						
2023	64,465																						
2024	63,914																						
Description of measurement methods and procedures to be applied:	Calculated as the difference between the measured quantities of the grid electricity export and the import from grid. The meters (Class 0.5 S) will be installed at the point of supply which defines the commercial boundary between Eskom and the CPA owner. The export electricity meter will be equipped with the check meter. The exported and imported electricity will be continuously measured and recorded monthly. Data will be digitally archived at least on a monthly basis.																						
QA/QC procedures to be applied:	Electricity meters will be calibrated according to South African Bureau of Standards (SABS) ³⁰ (relevant industry standards in the RSA) which is in line with paragraph 8 of Annex 60 to EB52. Readings are cross-checked with records for sold/purchased electricity.																						
Any comment:	-																						

³⁰ According to the SABS the SANS 474 regulation should be followed as per Table 5 on page 22 section 4.7.4.1.


SECTION C. Environmental analysis
C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:

The environmental analysis is undertaken at the CPA level. The environmental impact of solar parks depends on the particular location, size, how the plant is embedded in its environment as well as its uptake in the local community.

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts:

There is one major vegetation type that occurs in the study area, namely Kathu Bushveld, which is classified as Least Threatened. The site does not occur within any Centre of Floristic Endemism and the vegetation on site has relatively low conservation value despite being in a mostly natural state.

Factors that may lead to parts of the study area having high ecological sensitivity are the presence of saline pans on site and the potential presence of a small number of plant and animal species of conservation concern. These species are, however, either in a low conservation status category or there is a low likelihood of them occurring on site.

Wetlands (including pans) are protected under national legislation (National Wetlands Act). Any impacts on these areas would require a permit from the relevant National Department. There are three protected tree species that occur in the area and it has been determined that one of these (*Acacia erioloba*, Camel thorn) occurs at a high frequency on site. There are two declining plant species that have a high likelihood of occurring in available habitats in the study area. Neither is considered to be of high conservation concern.

There is one animal species of conservation concern that may occur in habitats within the study area, the Natal Long-fingered Bat, classified as near threatened. There are no roosting habitats on site or in the surrounding landscape. The probability of the species using the site is therefore moderate, but it would only be for foraging. The site is therefore not considered important for this species. There were no reptile or amphibian species of conservation concern likely to be found on site.

Most of the study area is in a natural condition, although some parts are degraded to various degrees due to livestock farming.

A risk assessment was undertaken which identified six main potential negative impacts on the ecological receiving environment. The significance of these impacts was assessed after collection of relevant field data. The identified potential impacts are the following:

1. Impacts on indigenous natural vegetation (MEDIUM)
2. Impacts on threatened plants (LOW)
3. Impacts on protected tree species (MEDIUM)
4. Impacts on threatened animals (LOW)
5. Impacts on pans (LOW to MEDIUM)



6. Establishment and spread of declared weeds and alien invader plants (MEDIUM)³¹

The projects do not result in any transboundary impacts.

C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA):

The National Environmental Management Act (NEMA) 107 of 1998, amended in 06/2010³², governs Environmental Impact Assessment (EIA) and requires a scoping assessment and EIA or Basic Assessment (BA) depending on the capacity (or other characteristics) of the activity. The Act is to provide for co-operative, environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of state; and to provide for matters connected therewith.

The Listing Notices specify measures which cannot be started without environmental authorization from the competent authority. The localized impact of the proposed CPA needs to be assessed by Scoping assessment and EIA. The legislation regarding the electricity production is given below:

Notice	Description of activity involving electricity production	Effect
NEMA listing notice 1:	The construction of facilities or infrastructure for the generation of electricity where: (a) the electricity output is more than 10 megawatts but less than 20 megawatts; or (b) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare.	Basic assessment is required
NEMA listing notice 2:	The construction of facilities or infrastructure for the generation of electricity where the electricity output is 20 megawatts or more.	Scoping assessment and EIA is required

³¹ Savannah Environmental (2010) final Environmental Impact Assessment Report: Proposed Sishen Solar Energy Facility and associated infrastructure, Northern Cape Province, for VentuSA Energy (Pty) Ltd.

³² http://www.capegateway.gov.za/eng/pubs/public_info/N/200703


SECTION D. Stakeholders' comments
D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:

Stakeholder's comments are invited at CPA level. CPA specific information is required for assessing the environmental impact and therefore this process is conducted at CPA level. Since stakeholders comments forms part of the EIA process, it will therefore also be conducted at CPA level in order to include essential CPA specific information.

D.2. Brief description how comments by local stakeholders have been invited and compiled:
CDM stakeholders meeting³³

A CDM stakeholders meeting was held on 27/03/2012 at the Sishen Golf Club, Hans Coetzee Street, Kathu by the CME of this PoA. An attendance registers and comment form was completed at the stakeholder conference. The following topics were discussed:

1. What is CDM – the purpose of CDM was discussed.
2. Project Details – Project details for the current CPA are discussed. The benefits of the project were discussed. Finally it was mentioned that CPA 001 seeks to be registered as a CDM project.
3. CDM in RSA Projects – It was explained that CPA 001 seeks to be registered as a CPA in a Programme of Activities, and that it will generate carbon credits because is substitutes Greenhouse gas emissions.
4. Blue World Carbon's Role – It was explained that it is the CME's role to prepare the documentation and oversee auditing procedures in order to register the CPA.

Overview of the EIA phase

The EIA phase has been undertaken in accordance with the EIA Regulations published in Government Notice 28753 of 21/04/2006. Key tasks undertaken within the EIA phase included:

- Consultation with relevant decision-making and regulating authorities (at National, Provincial and Local levels).
- Undertaking a public participation process throughout the EIA process in accordance with Regulation 56 of Government Notice No R385 of 2006 in order to identify any additional issues and concerns associated with the proposed CPA.
- Preparation of a Comments and Response Report detailing key issues raised by I&APs as part of the EIA Process (in accordance with Regulation 59 of Government Notice No R385 of 2006).
- » Undertaking of independent specialist studies in accordance with Regulation 33 of Government Notice No R385 of 2006.

³³ Stakeholder comments and advert



- Preparation of a draft EIA report in accordance with the requirements of the Regulation 32 Government Notice No R385 of 2006.

Authority Consultation

The National DEA is the competent authority for this application. A record of all authority consultation undertaken prior to the commencement of the EIA phase is included within the scoping report and EIA report. Consultation with the regulating authorities (i.e. DEA and DENC) has continued throughout the EIA process. On-going consultation included the following:

- Submission of a final scoping report (i.e. 09/2010) following a 30-day public review period (and consideration of stakeholder comments received)
- Ad hoc discussions with DEA and DENC in order to clarify the findings of the scoping report and the issues identified for consideration in the EIA process.

The following will also be undertaken as part of this EIA process:

- Submission of a final EIA report following the 30-day public review period
- Provision of an opportunity for DEA and DENC representatives to visit and inspect the proposed site, and the study area
- Consultation with Organs of State that may have jurisdiction over the CPA, including:
 - Provincial and local government departments (including South African Heritage Resources Agency, Department of Water Affairs, South African National Roads Agency Limited, Department of Agriculture, etc)
 - Government Structures (including the Department of Public Works, Roads and Transport, etc)
- Gamagara Local Municipality and Kgalagadi District Municipality
- Potentially affected and neighbouring landowners and tenants
- Local authorities
- Parastatals (i.e. Eskom Distribution)

A record of all authority consultation undertaken prior to the commencement of the EIA phase is included within the scoping report. A record of the consultation in the EIA process is included within EIA Report.

Public Involvement and Consultation

The aim of the public participation process was primarily to ensure that:

- Information containing all relevant facts in respect of the proposed CPA was made available to potential stakeholders and I&APs.
- Participation by potential I&APs was facilitated in such a manner that all potential stakeholders and I&APs were provided with a reasonable opportunity to comment on the proposed CPA.
- Comment received from stakeholders and I&APs was recorded and incorporated into the EIA process.

Through on-going consultation with key stakeholders and I&APs, issues raised through the scoping phase for inclusion within the EIA study were confirmed. All relevant stakeholder and I&AP information has been recorded within a database of affected parties (refer to Appendix C). While I&APs were encouraged



to register their interest in the CPA from the onset of the process, the identification and registration of I&APs has been on-going for the duration of the EIA process and the CPA database has been updated on an on-going basis.

In order to accommodate the varying needs of stakeholders and I&APs, as well as ensure the relevant interactions between stakeholders and the EIA specialist team, the following opportunities were provided for I&APs issues to be recorded and verified through the EIA phase, including:

- Focus group meetings (stakeholders invited to attend)
- Public meeting (advertised in the local press)
- Written, faxed or e-mail correspondence

In addition, during the EIA phase, a public meeting was held in order to provide feedback of the findings of the EIA studies undertaken. All registered I&APs were notified of the availability of the report and the public meeting by letter. In addition, newspapers advertisements were placed.

Stakeholders were invited to attend the public meeting held on:

Date: 29/11/2010

Time: 18:00 – 20:00

Venue: The VIP Lounge, Sishen Golf Club, Kathu

Records of all consultation undertaken are included within EIA Report.

The draft EIA Report was made available for public review from 22/11/2010 to 22/12/2011 at the following locations:

- Dibeng Public Library
- Kathu Public Library
- www.savannahsa.com

A summary of the procedures followed to inform stakeholders and Interested and Affected Parties (I&Aps) is provided in Table D.2-1.

Table D.2-1: Summary of activities undertaken and proposed during public consultation

CPA	Date
Acceptance of final scoping report by DEA	08/11/2010
Advertisement of EIA process in local newspapers: <ul style="list-style-type: none"> • Kathu Gazette 	20/11/2010
Public review period for draft EIA report:	22/11/2010 –
The Draft EIA was made available at:	22/12/2010 ³⁴

³⁴ Public review period was extended to the 10/01/2011. Refer to Appendix B2 of EIA.



<ul style="list-style-type: none"> • Dibeng Public Library • Kathu Public Library • www.savanahSA.com 	
Public meeting for draft EIA:	29/11/2010
Public Feedback Meeting:	30/11/ 2010
Submission of EIA to the Department of Environmental Affairs	01/2011
Environmental authorisation for the project was obtained from the Department of Environmental Affairs by means of a Record of Decision (ROD).	03/10/2011

D.3. Summary of the comments received:

Issues and comments raised by I&APs over the duration of the EIA process have been synthesised into Comments and Response Reports. All stakeholders’ comments and concerns were taken into account and considered in EIA and environmental management plan. No negative comments were raised by the stakeholders. All the questions at the CDM stakeholder conference were on how the CDM process works³⁵.

D.4. Report on how due account was taken of any comments received:

No negative comments were raised by the stakeholders. All stakeholders’ comments and concerns were taken into account and considered in EIA and environmental management plan.

³⁵ Stakeholder comments and advert



Annex 1

CONTACT INFORMATION ON ENTITY/INDIVIDUAL RESPONSIBLE FOR THE CPA

Organization:	Lylaserve (Pty) Ltd
Street/P.O.Box:	Woodlands Drive
Building:	The Highlands, Building 30
City:	Johannesburg
State/Region:	
Postfix/ZIP:	
Country:	Republic of South Africa
Telephone:	+27 11 779 2970
FAX:	
E-Mail:	
URL:	
Represented by:	
Title:	Director
Salutation:	Mr.
Last Name:	du Plessis
Middle Name:	-
First Name:	Pieter
Department:	
Mobile:	+27 79 506 7522
Direct FAX:	+27 (0)87 807 0143
Direct tel:	+27 010 205 1000
Personal E-Mail:	pieterd@aveng.co.za



NAME /TITLE OF THE PoA: South African Large Scale Grid Connected Solar Park Programme



Annex 2

INFORMATION REGARDING PUBLIC FUNDING



NAME /TITLE OF THE PoA: South African Large Scale Grid Connected Solar Park Programme



Annex 3

BASELINE INFORMATION



NAME /TITLE OF THE PoA: South African Large Scale Grid Connected Solar Park Programme



Annex 4

MONITORING INFORMATION



Appendix 1

List of Abbreviations

BA	Basic Assessment
BM	Build Margin
BWC	Blue World Carbon Asset Management (Pty) Ltd
CA	Competent Authority
CERs	Certified Emission Reductions
CM	Combined Margin
CME	Coordinating and Managing Entity
CPA	CDM programme activity
DNA	Designated National Authority
EA	Environmental Authorization
EB	Executive Board
EIA	Environmental Impact Assessment
GHG	Greenhouse gas
IPPs	Independent Power Producers
IRR	Internal Rate of Return
NEMA	The National Environmental Management Act
NERSA	National Energy Regulator of South Africa
OM	Operating Margin
O&M	Operations and Maintenance
PoA	Programme of activities
PLF	Project Load Factor
REFIT	Renewable Energy Feed - In Tariff
PPA	Power Purchase Agreement
RSA	The Republic of South Africa
SABS	South African Bureau of Standards