Clean Development Mechanism South Africa
Designated National Authority

energy
Department:
Energy
REPUBLIC OF SOUTH AFRICA

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Programme of Activities (PoA)

Project reference number (office use only)	
Date received (office use only)	

NOTES ON COMPLETING THIS DOCUMENT

1. Please provide the Programme of Activities Design Document (PoA-DD) in both hard-copy (one copy) and electronic formats (MSWord)
2. This information submitted to the DNA will remain confidential.
3. Please ensure that all fields are filled in as far as possible to allow for proper consideration of the proposed project. Please indicate if information is not available for any particular item and reasons for the unavailability of information.

Part A: Programme of Activities (PoA) Details

Programme of Activities (PoA) title	South African Wind Power Projects
Coordinating/Managing entity (CME) name	Carbon Protocol of SA
Component Project Activity 1 (CPA1) title	CPA1 under PoA 'South African Wind Power Projects'
Date of PoA Submission	03/08/2012

Project Developer	
Coordinating/Managing entity (CME) name	Carbon Protocol of SA

Organizational Category	Non-for-profit organization
Legal Status	Section 21
Street Address	150 West Street Sandton c/o Lloyd Christie Johannesburg Gauteng Province 2196 Republic of South Africa
Postal Address (if different from above)	Same as above.
Website Address	http://www.carbonprotocol.org/
Main Activities	The Carbon Protocol of SA is a non-profit collaboration of concerned and interested parties in South Africa that sets consistent and transparent standards to calculate, verify and publicly report greenhouse gas emissions into a single registry. The Registry supports both voluntary and mandatory reporting programs and provides comprehensive, accurate data to reduce greenhouse gas emissions. The Carbon Protocol of SA is hosting a platform for Programmes of Activities (PoA) under the Kyoto Protocol. This is an open platform for which the Carbon Protocol of SA will be the Coordinating/Managing Entity (CME) as specified under the strict Kyoto rules and requirements. Each PoA will be managed separately to ensure that the interest of both the underlying projects and project owners are protected. The Carbon Protocol of SA will, through this open platform, fulfill an integral role in the implementation and sustaining of PoAs in Africa for the duration of 28 years. The Carbon Protocol of SA will ensure that each PoA that joins will be managed in a professional manner that ensures that its specific needs are addressed and that the interests of the PoA and project owners are managed effectively.
Summary of Financial Performance in last fiscal year	
Contact Person(s)	Ms Hildegard Niehaus
Telephone	+27 (0) 723481505
Fax	+27 11 295 2268
Email Address	info@carbonprotocol.org

Contractual Arrangements

Contractual arrangements between various entities involved	*The Carbon Protocol of SA is hosting a platform for Programme of Activities (PoA) under the Kyoto Protocol. This is an open platform for which the Carbon Protocol of SA will be the Coordinating and Managing Entity (CME) as specified under the strict Kyoto requirements and rules. Each PoA will be managed*

	separately to ensure that the interest of the underlying projects are protected. With this platform the Carbon Protocol of SA will fulfill an integral role in the implementation and sustaining of PoA's in Africa.

Part B: Project Overview (Technical Summary, Location and Schedule)

Technical Summary of the project	
Objective of the Project	*The goal of this PoA is to promote the installation of grid connected wind energy generation facilities across South Africa. This programme will decrease power shortage, diversify the grid and reduce greenhouse gas emissions. The electricity will be sold to Eskom, the national electricity utility.*
Project Description *The installation of wind power systems delivering electricity to the South African grid will aid in increasing the renewable energy generation fraction to help achieve the country's renewable energy and carbon emission reduction targets. In 2005, the South African Department of Energy set a renewable energy target of 4% for 2013. In terms of carbon emissions, South Africa committed to reducing its carbon footprint by 34% by 2020 and by 42% by 2025 at the climate change conference in Copenhagen in 2010.* *The historically low cost of electricity also means that carbon intensive electricity is cheaper than any other source of power. This has made it difficult for renewable energy projects to compete with coal based power (Department of Water and Environmental Affairs, 2010). For these reasons there are currently no commercial wind farms in South Africa that are grid-connected.* *This PoA will provide commercial entities with a framework on which to overcome these barriers.* CPAs are wind energy generation facilities which utilise wind which is converted with large wind turbine generators (WTG) into electricity which is supplied to the national grid.	
Project Constraints No	
Technology to be employed	Even though the detailed technical characteristics might differ per CPA the following general conditions will apply to all CPAs. • CPAs are wind energy generation facilities which utilise wind which is converted with large wind turbine generators (WTG) into electricity which is supplied to the national grid. • The PoA will be open to all technology providers and projects that meet the eligibility criteria of this PoA. • A CPA under this PoA may be a single generation facility or a cluster of such facilities employing the same technology undertaken by the same CPA developer.

Technical Summary of the project	
	• According to the applicable methodology (ACM0002), capacity additions may however occur at the same site, as might be the case with subsequent stages for wind farm development. Each capacity addition will be handled as a separate CPA.
Greenhouse Gases Targeted	CO_2
Emission reductions	*Indicate the expected emission reductions that will occur due to the project.* *CPA1:* 104 321*tonnes CO2 equivalent per year*
Baseline & Additionality Assessment	*CPA1 demonstrates additionality by the barrier analysis. The main barrier that this project activity is the barrier due to prevailing practice.* *A proposed project activity is the First-of-its-kind in the applicable geographical area if:* *a) The project is the first in the applicable geographical area that applies a technology that is different from any other technologies able to deliver the same output and that have started commercial operation in the applicable geographical area before the start date of the project; and* *b) Project participants selected a crediting period for the project activity that is a maximum of 10 years with no option of renewal."* *The proposed wind energy facility project is the first of its kind, because there is no commercially operational wind project of this capacity that contributes to the South African Power Pool at this stage.* *A renewable energy country profile for South Africa by the International Renewable Energy Agency (IRENA) also states that energy supplied by wind only amounts to 0.002% of the country's energy supply.* *A letter from the South African Wind Energy Association confirms that wind power has not yet taken off in South Africa in a meaningful manner and that CDM can assist to alleviate the barriers that are faced by commercial wind farms.* *Seeing as there are currently only three pilot wind projects, which include the Klipheuwel wind farm operated by ESKOM near Cape Town and the Darling wind farm, it is concluded that Tiqua Wind Farm (CPA1) is in accordance with the CDM definition of first of its kind.*

Technical Summary of the project	
Monitoring	In accordance with the applicable methodology, all the relevant data is monitored as indicated in the table in section D.7.1. All measurements are conducted with calibrated measurement equipment according to relevant industry standards, which is specified in the tables in section D.7.1. Also see Appendix 5 for the detailed "Tariff Metering Requirements and Responsibilities" report which is applicable to the metering of the electricity sold by the project activity. The monitoring period will start from the date of commissioning of the CPA. An annual monitoring report will be produced. The CPA facility manager is responsible for the effective implementation of the monitoring management plan elements with regard to metering. All elements of the monitoring plan will be supported by formal procedures and training of delegated personnel, once the facility becomes operational. The CME is responsible for managing and monitoring the data set that generates the grid emission factor. All data collected will be archived electronically in two places for security purposes. Data will be consolidated and submitted to the CME database on a monthly basis. All data will be kept by the CPA and the CME for at least two years after the end of the crediting period.
Type of project/activities	*Identify which type of activity is involved in this project – and for each, provide brief details*
a. Energy Supply	*The proposed project activity is the construction of a greenfield wind power plant.*
b. Energy Demand	*Not applicable*
c. Industrial Process	*Not applicable*
d. Transport	*Not applicable*
e. Waste Management	*Not applicable*
f. Forestry/ land use	*Not applicable*
g. Other	*Not applicable*
Project Boundary The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to. The wind energy facility (project activity) has a distinctive physical demarcated boundary.	
Indicate Emissions outside the Project Boundary	*Not applicable*

Location of the Project

Province	All
Nearest city/large town	All
Brief description of the location of the project site	The PoA is located within the geographical boundaries of South Africa. CPA1 is located on the Remaining portion of the farm Rietfontein 151, approximately 70 km north-west of Vredendal, and falls within the Matzikama Local Municipality and West Coast District Municipality.

Project Schedule/Timetable	
Earliest Project Start Date	The date of Global Stakeholder Consultation (GSC) is the start date of the PoA. (17/05/12)
When is the expected first year of CER delivery	*2013*
Project Lifetime	*10 Years*
Project End Date	*12/2023*
Crediting Period	*10 years*
Current Status or phase of the project	*The project has been approved, but not yet implemented.*
DNA Approval	*No*
Approval by other bodies	*No*

Part C: Performance Against the DNA's Sustainable Development Criteria

South Africa has identified the following sustainable development criteria and indicators against which each CDM project will be assessed. Please provide your interpretation of how this project will address each of these **criteria and indicators** where they are relevant to the project. If the space provided is not sufficient please append additional information as required.

NOTE: For all indicators which are of relevance to the project show how the performance of the project against these indicators can be objectively monitored and measured on an ongoing basis.

1. Economic: Does the project contribute to national economic development?

South Africa's national electricity provider, Eskom, carried out planned electricity supply interruptions at the beginning of 2008. These interruptions were caused by the demand for electricity exceeding the supply of electricity. During the interruptions, grid electricity was not accessible and led to the country experiencing severe economic losses. Developing a series of wind power projects will lead to more supply and increase the margin on the grid,

therefore reducing the probability that such "black-outs" will occur again. There will be a transfer of knowledge from the countries supplying the wind turbine systems to South Africa, and the project will contribute to foreign reserve earnings for South Africa via carbon credit sales revenue.	
2. Social: Does the project contribute to social development in South Africa? The programme will create approximately 100 jobs in the construction and 20 jobs in the operations phase of the CPAs that will be developed under the umbrella of this programme.	
3. Environmental: Does the project conform to the National Environmental Management Act principles of sustainable development? Please provide **brief** comment for each of these below.	
i) That the **disturbance of ecosystems and loss of biological diversity** are avoided, or where they cannot be avoided, are minimised and remedied	*There is no substantial disturbance of ecosystems and loss of biological diversity in this project.*
ii) That **pollution and degradation of the environment** are avoided, or where they cannot be altogether avoided, are minimised and remedied	There is negligible pollution and degradation of the environment in this project.
iii) That the **disturbance of landscapes and sites that constitute the nation's cultural heritage** is avoided, or where it cannot be altogether avoided, is minimised and remedied	There will be negligible disturbance of landscapes and sites that constitute the nation's cultural heritage in this project.
iv) That **waste is avoided**, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner	There is no significant waste in this project.
v) That **the use and exploitation of non-renewable resources is responsible and equitable**, and takes into account the consequences of the depletion of the resource	There is no significant use of non-renewables in this project.
vi) That the **development, use and exploitation of renewable resources is responsible and equitable**, and takes into account the consequences of the	The project will reduce electricity consumption from a predominantly coal-fired grid. The use of the wind resource is responsible and equitable.

depletion of the resource.	
vii) That **a risk averse and cautious approach** is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions	A reputable electrical engineering firm is being used for project implementation.
vii) That **negative impacts on the environment and on people's environmental rights** be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied	*The impacts on the environment are improved by implementing this project.*
Other comments **Please provide any other comments on how this project contributes to sustainable development in South Africa (**optional)	

Indicators in Support of the Project Approval Criteria			
Category		**Indicator**	**Comment**
Environmental	Impact on local environmental quality	• Impact of the project on air quality • Impact of the project on water pollution • Impact of the project on the generation or disposal of solid waste • Any other positive or negative environmental impacts of the project (such as impacts on noise, safety, visual impacts, or traffic)	• The project will improve air quality by reducing greenhouse gas emissions. • There will be negligible water pollution associated with this project • There will be no generation of solid waste, or disposal thereof in this project • The overall impact of this project on the local environmental quality is positive.
	Change in usage of natural resources	• Impact of the project on community access to natural resources • Impact of the project on the sustainability of use of water, minerals or other non renewable natural resources • Impact of the project on the efficiency of resource utilisation	• The project will indirectly reduce coal usage in South Africa.
	Impacts on biodiversity and ecosystems	• Changes in local or regional biodiversity arising from the project	• This project has no influence on the local or regional biodiversity.

Indicators in Support of the Project Approval Criteria			
Category		**Indicator**	**Comment**
Economic	Economic impacts	• Impact of the project on foreign exchange requirements • Impact of the project on existing economic activity in the area • Impact of the project on the cost of energy • Impact of the project on foreign direct investment	• The project will contribute to foreign reserve earnings for South Africa via the carbon credit sales revenue. • The project will increase the cost of energy production. Carbon credits revenue will however offset the increased cost.
	Appropriate technology transfer	• Positive or negative implications for the transfer of technology to South Africa arising from the project • Impacts of the project on local skills development • Demonstration and replication potential of the project	• The project is replicable. • The development of renewable energy offers the opportunity to establish a new industry within the South African economy.

Indicators in Support of the Project Approval Criteria			
Category		**Indicator**	**Comment**
Social	Alignment with national provincial and local development priorities	• How the project is aligned with provincial and national government objectives • How the project is aligned with local developmental objectives • Impact of the project on the provision of, or access to, basic services to the area • Impact of the project on the relocation of communities if applicable • Contribution of the project to a any specific sectoral objectives (for example, renewable energy targets)	• The project decreases the use of grid electricity and thus reduces greenhouse gas emissions. This will help reach the target the South African government committed to; the reduction of the country's emissions by 34% from business as usual.
	Social equity and poverty alleviation	• Impact of the project on employment levels? (specify the number of jobs created/lost; the duration of time employed, distribution of employment opportunities, types of employment, categories of employment changes in terms of skill levels and gender and racial equity) • Impact of the project on community social structures • Impact of the project on social heritage • Impact of the project on the provision of social amenities to the community in which the project is situated • Contribution of the project to the development of previously underdeveloped areas or specially designated development nodes	The programme will create approximately 100 jobs in the construction and 20 jobs in the operations phases of the programme. The project is located in an area with minimal job alternatives.

Indicators in Support of the Project Approval Criteria			
Category		**Indicator**	**Comment**
General	General Project Acceptability	• Are the distribution of project benefits deemed to be reasonable and fair?	• This is a green initiative by business and the distribution of benefits is deemed to be fair and reasonable.

Part D: Finance

Project Costs	
Development Costs (R's)	Not currently available
Installed Costs (R's)	Not currently available
Other Costs (R's)	Not currently available
Total Project Costs (R's)	Not currently available
Sources of Finance	
Equity	*Name of Organisation(s) and amount (R's) contributed by each* Not currently available
Debt (long term)	*Name of organization(s) and amount (R's) for each* Not currently available
Debt (short term)	N*ame of organization(s) and amount (R's) for each* Not currently available
Amount not identified (R's)	*Amount (R's) and a brief summary of the needs and any outstanding issues* *(1 paragraph or less)* Not currently available
Total CDM Contribution sought	*Amount (R's) and a brief summary of the needs and any outstanding issues* *(1 paragraph or less)* Not currently available
Expected Price of CER in case of a contract to purchase for: A period of 7 years A period of 10 years A period of 14 years (2x7 years)	Not currently available
Indicate the **projected Internal Rate of Return** for the project with and without CER revenues.	*Note: Please indicate assumed price of CER as used in your calculation* Not currently available

Constraints on tradability of carbon credits	*Have any commercial arrangements been made that may impact the tradability of the carbon emission reductions? If yes, please define.Note. Examples would be subjection to a mortgage, government tax etc.* *None*
Preliminary discussions with potential purchasers	*Have you had any preliminary discussions with any potential purchasers of the carbon credits (CERs)* *If yes, please give brief details.* *Confidential*