CLEAN DEVELOPMENT MECHANISM
PROJECT DESIGN DOCUMENT FORM (CDM-SSC-PDD)
Version 03 - in effect as of: 22 December 2006

CONTENTS

Annexes

Revision history of this document

Version Number	Date	Description and reason of revision
01	21 January 2003	Initial adoption
02	8 July 2005	• The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document. • As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at <http://cdm.unfccc.int/Reference/Documents>.
03	22 December 2006	• The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.

SECTION A. General description of small-scale project activity

A.1 Title of the small-scale project activity:

Boskor Renewable Electricity Plant (BREP). Version 1. May 2008.

A.2. Description of the small-scale project activity:

The purpose of the project activity is to generate electricity from sawmill residues, for sale onto the national grid.

The process involves the combustion of residues (bark, sawdust, wood chips, off-cuts) in a boiler in producing high pressure steam for driving the 2.7 MW steam turbine and generator. The electricity produced is fed into the national grid.

- The South African national electricity transmission grid is owned and managed by a single parastatal body, ESKOM. As such, the generation mix and associated load (kg CO_2 / kWh) is known and consistent across the country. The figure is published on a yearly basis in ESKOM's annual report.
- South Africa has experienced shortages of electricity over the past two years with power outages and rolling load shedding. Projections show exacerbated shortages in the future (ESKOM, 2008). A capacity-outlook for the period from 2003 to 2022 showed a current installed capacity of some 38 000 MW. Imports from the Cahora Bassa hydroelectric system (in Mozambique) can take that to 40 000 MW. Peak demand rises in the period from some 34 000 MW to 50 000 MW and capacity required by 2022 to meet peak demand is about 55 000 MW. Eskom itself will add 5 304 MW of national capacity by 2009, made up of the return-to-service projects, its own Open Cycle Gas Turbine (OCGT) and upgrades to existing stations.
- This project will make a small contribution in addressing the experienced and impending deficit by generating a nominal 2.7 MW_e and feeding it into the grid.
- The remote location of the project in relation to major power plants means that transmission is alleviated to an extent which exceeds the simple arithmetic contribution - providing relief to an overly extended transmission line and contributing to supply stability in the region.

Contribution to Sustainable Development

The project is primarily dependent on sawmill residues, and to a limited extent, on harvesting residues from the commercial Pine plantations supplying the sawmill. All supplying plantations are certified under the Forest Stewardship Council (FSC) SGS-FM/COC-0133 (please refer to attachment)

New forest management regimes will be introduced into the supplying plantations, maximizing the production and utilization of biomass while ensuring the continued production of traditional forest products. A higher initial plant stocking will reduce the need for herbicides, improve the quality of the young trees, and increase early yields and revenue streams.

Today saw dust is piled up close to the plant where it slowly decays and during the process releases methane. By the use of saw dust as fuel in the boilers also the release of methane to the atmosphere is lowered.

The projects contribution to sustainable development lies in the production of clean electricity to the grid in a remote area which is subject to supply constraints and power outages.

A.3. Project participants:

Name of Party involved ((host) indicates a host Party)	Private and/ or public entity(ies) project participants	Indicate if the Party involved wishes to be considered a project participant
Republic of South Africa (host)	MTO Forestry (Pty) Ltd. (private)	No

A.4. Technical description of the small-scale project activity:

A.4.1. Location of the small-scale project activity:

The project is located in the South-Western corner of the Eastern Cape Province, Republic of South Africa. Specific coordinates are 33° 58' 17" South and 23° 48' 48"East.

A.4.1.1. Host Party(ies):

Republic of South Africa

A.4.1.2. Region/State/Province etc.:

Eastern Cape Province

A.4.1.3. City/Town/Community etc:

The area falls under the Cacadu District Municipality with its seat in Port Elizabeth. The Cacadu District Municipality is constituted by 9 local municipalities. The project is located within the Kou-Kamma local municipality (EC109), based in the town of Karreedouw. P.O. Box 11, Kareedouw, 6400.

A.4.1.4. Details of physical location, including information allowing the unique identification of this small-scale project activity :

The project site is located adjacent to and north of the National Route 2 (N2) between the cities of Knysna in the West (70 km) and Port Elizabeth in the East (170 km). Geographically, the site lies in area characterised by a narrow coastal plateau sandwiched between a steep drop-off to the Indian Ocean in the south and the Outeniqua mountain range which runs parallel with the coastline immediately north of the site. The project site is located on an existing sawmill site, and the installation will take place within the confines of an existing boiler room. The sawmill has been in existence for more than 40 years and is surrounded by excessive exotic pine plantations (*Pinus spp*). Apart from staff housing quarters, there are

no neighbours within a 5 km radius of the plant. To the south (8 km), the plantations are partially bordered by the Storms River National Park, which is a combined coastal forest and marine reserve managed by the South African National Parks Board (SANPARKS). To the west, the company plantations are bounded by other privately owned plantations and the Coldstream sawmill, approximately 8 km away.

A hyperlink to the internet based mapping service, Google maps, is given here:
(http://maps.google.com/maps/ms?ie=UTF8&hl=da&msa=0&ll=-33.978243,23.815699&spn=0.036157,0.058022&t=h&z=14&msid=114182546329620990217.00044ec042bbf47aecf1e)

Specific coordinates are latitude 33° 58’ 17” South and longitude 23° 48’ 48”East

Figure 1: Map showing location of the project on the South-Eastern coast of South Africa at increasing levels of detail (counter-clockwise).

A.4.2. Type and category(ies) and technology/measure of the small-scale project activity:

The project is categorized as Type1: Renewable Energy Project, Category 1 D, Grid Connected Renewable Electricity Generation.

The technology consists of a biomass-fed boiler providing steam to a condensing turbine which drives a generator. The nominal electrical production capacity of 2.7 $MW_{(e)}$ implies that it qualifies as a small-scale project activity as the total output does not exceed 15 MW. The installation includes the modification of an existing boiler room, designed for producing steam for the purpose of lumber drying. The modification involves the installation of a 20 ton hr^{-1} boiler and the refurbishment of an old steam turbine. There are 4 boilers with separate stacks installed in the boiler house. The modification involves the replacement of an obsolete boiler.

In terms of technology transfer the basic components (boiler, turbine and generator) do not constitute a transfer of know-how to the Host Party. Small scale steam turbine produced electricity is based on well known technology, which has been applied at least in the South African sugar industry for many decades. Also, in the 1970's, a number of primary wood processing industries installed capacity for electricity generation, but the low price of coal and the ample supply of low price electricity on the national grid meant that many were never commissioned. However, reviving the generation of electricity at sawmills could be seen as an important step in illustrating the potential to the wood processing industry at a national level.

Environmentally, the technology involves a limited degree of sound pollution, atmospheric emissions, thermal emissions (cooling), as well as water consumption (boiler make-up water due to losses to maintenance blow-downs and steam losses in the system). Finally, ash is produced by the combustion process. These issues are dealt with in Section D. Environmental Impacts. The project owners subscribe to a certified Environmental Management System based on ISO 14001 – MTO EMS (Please refer to attachment)

A.4.3 Estimated amount of emission reductions over the chosen crediting period:

The chosen crediting period is 10 years. The distribution of emission reductions to year after project inception is given in the following table:

Year	Annual estimation of emission reductions from electricity production in tonnes of CO_2
2008 *	3,502
2009	14,010
2010	14,010
2011	14,010
2012	14,010
2013	14,010
2014	14,010
2015	14,010
2016	14,010

2017	14,010
2018	10,508
Total estimated reductions (tonnes of CO_2 equivalent)	140,100
Total number of crediting years	10
Annual average over the crediting period of estimated reductions (tonnes of CO_2 e)	14,010

*Assumes that the project is initiated in the 4th quarter of 2008.

A.4.4. Public funding of the small-scale project activity:

There is no funding from a Party included in Annex 1 to the Convention, nor is there public funding by the Host Party.

A.4.5. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity:

According to Appendix C of the Simplified Modalities and Procedures for small-scale CDM project activities, debundling is defined as the fragmentation of a large project activity into smaller parts. According to that document, a proposed small-scale project activity shall be deemed to be a debundled component of a large activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:

- With the same project participants;
  The same project participants have indeed received a Letter of No Objection against a PIN for a similar project from the South African DNA. The project has not been submitted for registration as yet.
- In the same project category and technology/measure; and
  The other project does in fact comply with the same category and technology/measure
- Registered within the previous 2 years; and
  The registration process of the alternative project has not be initiated
- Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point
  The other project is located more than five hundred kilometres (500 km) from the boundary of the project described in this PDD.

  Thus, due primarily to the fact that the other project proposal was for a site more than 500 km distant from the present project, the present project can not be interpreted as a debundled part of a large scale project.

SECTION B. Application of a baseline and monitoring methodology

B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity:

The approved methodology applied is I.D. Grid Connected Renewable Electricity Generation Version 13

B.2 Justification of the choice of the project category:

The choice of category I.D. is justified by the intention to generate renewable electricity to the national grid. According to the 'Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories' I.D./Version 13, project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small-scale Type 1 project, the total output of the modified or retrofitted unit should not exceed the limit of 15 MW(e) or 45 MW(th). The nominal electrical generation potential of the unit to be retrofitted is 2.7 MW(e). The unit uses only renewable biomass, and does not co-fire with fossil fuel.

B.3. Description of the project boundary:

The project boundary encompasses the physical, geographical site of the renewable generation source. The site is an integral part of a larger sawmill complex. The sawmill is located in an isolated setting, bounded to the south by a national highway (N2) and to the north, east and west by extensive pine (*Pinus spp*) plantations.

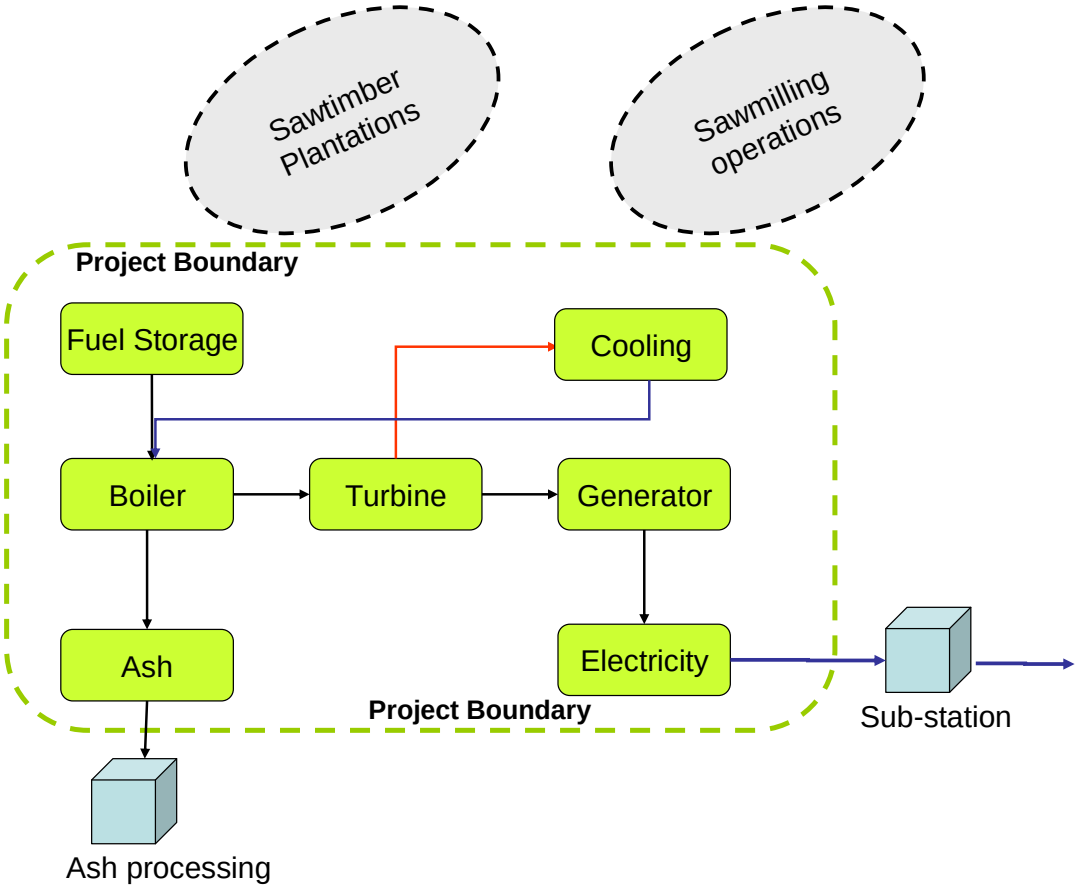

Figure 2. Processes included within the project boundary

B.4. Description of baseline and its development:

The baseline is the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO_2e / kWh) calculated in a transparent and conservative manner as (9b): The weighted average emissions (in kg CO_2e / kWh) of the current generation mix, calibrated by year. The 'current generation' mix is made public through the annual reports of the South African electricity utility, Eskom. Eskom generates 95% of electricity used in South Africa with a net maximum capacity of 37,761 MW. They also distribute 100% of the electricity on the national grid. Eskom has calculated the carbon emission factor to be 0.96 kg/kWh in accordance with the CDM approved consolidated methodology 0002. Eskom run an internet based 'CDM resource centre' (http://www.eskom.co.za/live/content.php?Item_ID=4226) which provides information to project developers. Over the next 10 years (up to 2017 – and the period relevant to this project) Eskom plans to increase capacity at open cycle gas turbine plants by 2053 MW, at a new coal fired plant at Medupi in the Limpopo province by 4500 MW and a pumped storage, peak-load plant of 1332 MW. The emission factor is therefore expected to increase marginally over this period.

The actual baseline and emission reduction will need to be calibrated in accordance with the Eskom annual report on a year by year basis (i.e. an integral part of the monitoring plan).

B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity:

In it's White Paper on Renewable Energy (Department of Minerals and Energy, Republic of South Africa, Nov. 2003) the South African Government committed itself to 'achieving a target of 10 000 GWh (0.8 Mtoe) renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar and small-scale hydro. This is approximately 4% (1667 MW) of the projected electricity demand for 2013 (41,539 MW).' The White Paper further states that '*This policy is launched against the background of a massive campaign of electrification in South Africa and now the start of a process of managed liberalisation of the energy sector including the transformation of the electricity distribution sector into regional electricity distributors*.'

In 2008, 5 years after the White Paper was launched, South Africa is in the midst of a veritable energy crisis. With a reserve generation margin of under 10%, the country has been subject to rolling blackouts for more than a year. Government has published a number of 'Interventions to address electricity shortages' such as those available through the Department of Minerals and Energy (DME) in Jan. 2008, titled 'National Response to South Africa's Electricity Shortage'. There have been unprecedented levels of load shedding in the country, brought about by this shortage of generation capacity / low reserve margin (see Figure 3). The risk of load shedding is expected to remain high until at least year 2013. The country has seen electricity consumption figures exceeding 4% growth on a year-on-year basis (equating to over 10,000 GWh or the entire Renewable Energy target).

At the same time, South Africa has some of the world's largest coal reserves. As the country grapples with acute shortages of generating capacity, the build margin is likely to be strongly dominated by cheaper coal firing technology. Thus the forecast trajectory of consumption and production leave no uncertainty in the question of the proposed project being additional in terms of emission reductions. The CDM project activity involves the generation of electricity in a power plant purely on the basis of a sustainable woody biomass resource. The electricity is therefore considered to be produced in a carbon neutral cycle. Emissions reductions occur as a result of the 2.7 $MW_{electrical}$ offsetting the equivalent amount of electricity produced with an average net emission of 0.96 kg kWh^{-1} (Eskom power

Further updated information on the power shortages plaguing the country is available at the official website of the Department of Minerals and Energy (DME).

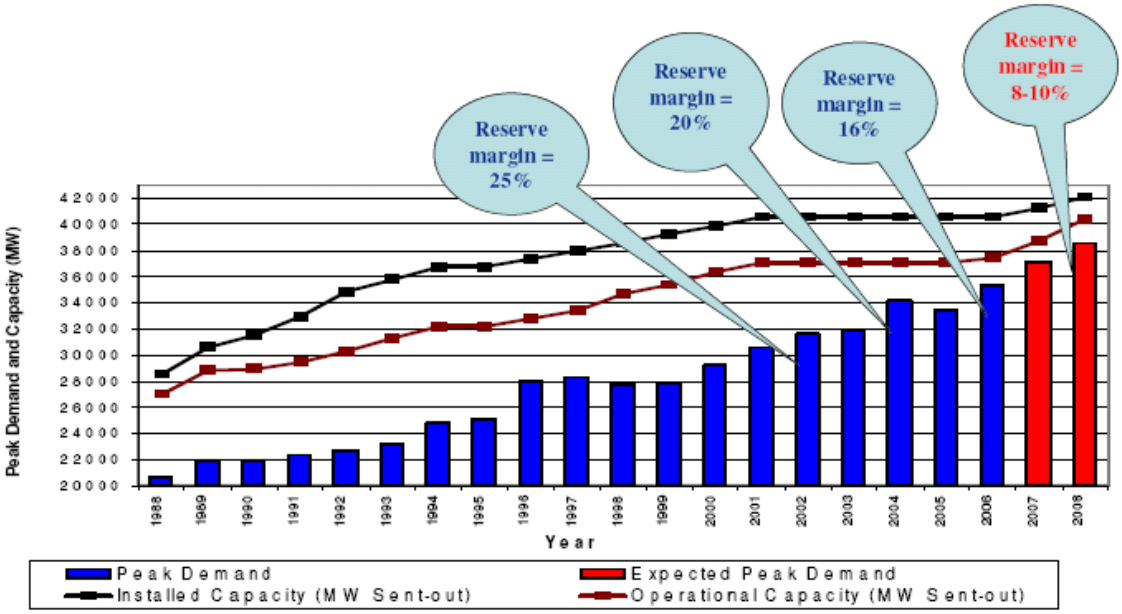

Figure 3. The development in peak demand and generation capacity over the past 20 years. The reserve generating margin of under 10% is considerably below the required margin, resulting in heavily reduced maintenance scheduling, and therewith, frequent unforeseen power outages.

In terms of the barriers listed in Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities, the Investment barrier (a) could be identified as perhaps as being the strongest driver for the activity. The project owners have only recently (2-3 years ago) paid a substantial amount for the installation of a suitable line extension from the national grid, through which the receive Eskom power. Electricity in South Africa is still relatively cheap, despite recent steep increases. Even given the power outages and the resultant production losses, there would not be sufficient financial incentive to invest in new power generation capacity. This has become marginally feasible now given the relatively elevated CER price.

Regarding the technological barrier (b), the sawmill would be content to install only extra boiler capacity without refurbishing the turbine and generator. Extra boiler capacity is required in producing process steam for lumber drying. The boiler-only option would require significantly less input and risk in terms of managerial resources (on-site engineer) and maintenance.

In terms of the barrier due to prevailing practice (c) certainly prevailing practice has led developments away from energy self-sufficient remote industries to grid connected industries over the past decades. This is true both for e.g. wood processing plants, but especially large state owned institutions (such as hospitals) across the country. Prevailing practice is characterised by a drive to 'electrify the nation'

through grid connection. This was the case for the project owners in 2005. This is also what subsequently has led to the crisis in terms of the strongly diminishing reserve generating margin.

In summary, it is maintained that barrier (a) in combination with elements of (b) and (c) would have inhibited the process from becoming a grid connected renewable electricity project without the additional benefits and information brought about by the CDM.

B.6. Emission reductions:

B.6.1. Explanation of methodological choices:

Emission reductions are brought about the replacement of largely coal derived grid based electricity (a certified emission factor of 0.96 kg CO_2 / kWh) with renewable biomass based electricity. The renewable biomass based electricity is assumed to have a CO_2 emission factor of zero (0) kg / kWh, thus the net greenhouse gas reduction equates to the emission factor for the amount of grid based electricity offset.
Leakage is not considered as the energy generating equipment is not transferred from another activity and existing equipment is not transferred to another activity.

B.6.2. Data and parameters that are available at validation:

(Copy this table for each data and parameter)

Data / Parameter:	**Electricity generation**
Data unit:	kWh, kVA
Description:	Units of electricity generated
Source of data used:	Meter at substation / transformer
Value applied:	1,340,250 kWh / month (on average)
Justification of the choice of data or description of measurement methods and procedures actually applied :	As all the electricity generated is based on renewable biomass (wood residues), the metered quantity of electricity produced can be used as a direct parameter for the total amount of renewable electricity produced.
Any comment:	As the meter will serve as the common basis from which the project owners will invoice the electricity utility Eskom, there is a strong incentive from both parts to ensure that the meter is calibrated and accurate.

Data / Parameter:	**Feedstock**
Data unit:	Tonnes, m3
Description:	Volumes of wood residues available / consumed
Source of data used:	Sawmill intake and recovery volumes
Value applied:	1 tonne of fuel at 40% moisture (green weight) = 12 GJ total energy
Justification of the choice of data or description of measurement methods and procedures	Roundwood intake into the sawmill is scanned in a 3D scanner, providing a highly accurate and reliable estimation of intake volume. Recovery rates on the green and dry chains are measured on a daily basis. The difference between intake and final output, adjusted for shrinkage, provides an effective estimate of wood residue volumes available.

actually applied :	
Any comment:	Biomass is ultimately supplied from Forest Stewardship Council (FSC) certified commercial pine plantations – implying that the intake is always from a renewable source

Data / Parameter:	**Emission factor**
Data unit:	kg CO_2 / kWh
Description:	Weighted average emission of current generation mix
Source of data used:	Annual Reports – Electricity Utility Eskom
Value applied:	0.96 kg CO_2 / kWh
Justification of the choice of data or description of measurement methods and procedures actually applied :	The Electricity Utility Eskom generate 95% and distribute 100% of the electricity consumed on the South African national grid, thus the weighted average emission of their annual generation mix is considered to be representative. The figure is stipulated each year in the publicly available Eskom annual report.
Any comment:	

B.6.3 Ex-ante calculation of emission reductions:

The table below provides an overview of the assumptions and calculations made in arriving at the emission reduction figure of 14,010 t CO2 e per year.

Electricity Generation			
Description	**Calculation**	**Quantity**	**Units**
A. Nominal Generating Capacity Installed		2.7	MWe
B. Effective Generating Capacity	80% of A.	2.16	MW
C. Effective Operating hours	85% of 8760	7,446	hrs
D. Gross Annual Generation	C.* D.	16,083	MWh / year
E. Auxiliary Electrical Consumption (200kW†)	C.* 200 kW	1,489	MWh / year
F. Net Annual Generation	D.- E.	14,594	MWh / year

Emission Reductions			
Description		**Quantity**	**Units**
G. Baseline Emission Factor	Official source	0.96	kg CO2e / kWh
H. Baseline Emission Factor (tonnes)	G. * 1000	0.96	t CO2e / MWh
I. Total Emission Reductions	F. * H.	**14,010**	**t CO2e / year**

†**Note:** The auxiliary consumption is set considerably higher than expected and covers all related consumption in feeding and operating the plant, as well as conversion and transmission losses within the project boundary.

B.6.4 Summary of the ex-ante estimation of emission reductions:

Year	Estimation of project activity emissions (tCO_2 e)	Estimation of baseline emissions (tCO_2 e)	Estimation of leakage (tCO2 e)	Estimation of overall emission reductions (tCO_2 e
2008	358	3860	0	3502
2009	1,430	15,440	0	14,010
2010	1,430	15,440	0	14,010
2011	1,430	15,440	0	14,010
2012	1,430	15,440	0	14,010
2013	1,430	15,440	0	14,010
2014	1,430	15,440	0	14,010
2015	1,430	15,440	0	14,010
2016	1,430	15,440	0	14,010
2017	1,430	15,440	0	14,010
2018	1,072	11,580	0	10,508
Total (t CO_2 e)	14,300	154,400	0	140,100

B.7 Application of a monitoring methodology and description of the monitoring plan:

B.7.1 Data and parameters monitored:

(Copy this table for each data and parameter)

Data / Parameter:	Electricity generated per month
Data unit:	kWh / month
Description:	The amount of electricity generated in the relevant period
Source of data to be used:	Meter at client end of transformer
Value of data	1,340,250 kWh / month (on average)
Description of measurement methods and procedures to be applied:	Measurement involves electronic reading of the meter. Continuous production figures are accrued to hourly, daily, weekly, monthly, quarterly, half-yearly and annual data will be recorded. A monthly summary of the production rate will be recorded for monitoring purposes. This parameter forms the basis for the sale of electricity to the electricity utility, Eskom. Thus, both technical and financial data is recorded ,and can be verified, by both parties.
QA/QC procedures to be applied:	The meter is calibrated in accordance with the regulations and stipulations laid down by Eskom and the National Energy Regulator for Independent Power Producers feeding into the national grid.
Any comment:	

Data / Parameter:	Biomass consumption per species group
Data unit:	Tonnes dry matter
Description:	Amount of biomass consumed per day
Source of data to be used:	Sawmill management data
Value of data	45 t dry matter per day
Description of measurement methods and procedures to be applied:	Round wood intake into the sawmill is scanned in a 3D scanner, providing a highly accurate and reliable estimation of intake volume. Recovery rates on the green and dry chains are measured on a daily basis. The difference between intake and final output, adjusted for shrinkage, provides an effective estimate of wood residue volumes available. Dry matter is given according to tables per species grouping.
QA/QC procedures to be applied:	ISO 14001 – MTO EMS Standard (Refer to attachment)
Any comment:	The value is based on a round wood intake of 350 (wet) tonnes per day, with a recovery of 60% (producing 75 t dry matter per day)

Data / Parameter:	Specific Fuel Consumption
Data unit:	t (biomass) / t (steam) and t (steam) / MWh e
Description:	Measurement of the conversion efficiency of the plant. The conversion of biomass to tonnes of steam produced per hour is recorded commonly for all boilers, while the conversion of steam to electricity is calculated as the quotient of steam pressure / flow and electrical output..
Source of data to be used:	Internal sawmill production statistics provide an accurate estimate of the biomass fuel source as monitored above. Feed speeds and loading on conveyors feeding the boilers are monitored continuously. Steam pressure and flow meters are monitored continuously. The electrical output is monitored as per the first monitoring parameter above.
Value of data	0.9 tonnes biomass (dry matter) per MWh electrical
Description of measurement methods and procedures to be applied:	Measurement of the data sources mentioned happens continuously. A manual calculation of the conversion is required. The values will be accrued to monthly averages per parameter before being calculated. .
QA/QC procedures to be applied:	ISO 14001 – MTO EMS Standard (Refer to attachment)
Any comment:	The value is calculated on the basis of the assumptions of 12 GJ per tonne of pine chips at 40% moisture content, with an overall generation efficiency of 20%, where 3.6 GJ is equivalent to 1 MWh input.

B.7.2 Description of the monitoring plan:

According to the simplified baseline and monitoring methodology for category I.D. projects:

13. Monitoring shall consist of metering the electricity generated by the renewable technology.

- The monitoring plan describes how the metering of electricity will take place, and emphasises that the calibration and accuracy of the meter is ensured by the buyer and seller of the electricity.

14. For projects where only biomass or biomass and fossil fuels are used the amount of biomass and fossil fuel input shall be monitored

- Only biomass is used in the boiler – the amount of biomass becoming available for consumption as a by-product of the sawmilling process is calculated on a daily basis as a function of the throughput and recovery rates at the mill.

15. For projects consuming biomass a specific fuel consumption of each type of fuel to be used should be specified ex-ante. The consumption shall be monitored.

- It is anticipated that the biomass residues from sawmilling will only arise from the genus *Pinus*, specifically *P.radiata and P.elliotti.* The volume weighted distribution to species is not known *ex ante* and is subject to change and variation.

17. If more than 1 type of biomass fuel is consumed, each shall be monitored separately

- It is anticipated that the biomass residues from sawmilling will only arise from the genus *Pinus*, specifically *P.radiata and P.elliotti.* The volume weighted distribution to species is not known *ex ante* and is subject to change and variation. Despite differences in wood density, and therewith calorific value per unit volume, the source will be treated as a 1 single type of biomass, converted to dry tonnes.

18. The amount of electricity generated using biomass fuels calculated as per paragraph 16 shall be calculated using specific fuel consumption and amount of each type of biomass fuel used. The lower of the two values should be used to calculate emissions.

- The specific fuel consumption will be measured according to the data parameter in the previous section. Continuous data on boiler feed speeds, loading, steam pressure and steam flow will be summarise on a monthly basis where the specific fuel consumption (MWh / t biomass) will be calculated. Presently, the efficiency of steam production is closely monitored on a similar basis.

For points 13-18, an electronic archive will be maintained on the local server with backup facilities. This is currently standard practice for all financial / management data at the mill. This data should be available for a minimum of 2 years. A special data repository will be established for this purpose.

Measuring equipment will be certified to national and ISO 14001 standards and calibrated at appropriate intervals. Frequent calibration is also a requirement from the electricity utility Eskom as the electricity

meter forms the basis of sale, thus there is a strong incentive from both parts to ensure its accuracy. Date of calibration and responsible authority will be recorded against each identifiable meter.

B.8 Date of completion of the application of the baseline and monitoring methodology and the name of the responsible person(s)/entity(ies)

SECTION C. Duration of the project activity / crediting period

C.1 Duration of the project activity:

Ten (10) Years

C.1.1. Starting date of the project activity:

The project activity will commence on 01.10.2008

C.1.2. Expected operational lifetime of the project activity:

15 Years

C.2 Choice of the crediting period and related information:

C.2.1. Renewable crediting period

C.2.1.1. Starting date of the first crediting period:

N/A

C.2.1.2. Length of the first crediting period:

N/A

C.2.2. Fixed crediting period:

C.2.2.1. Starting date:

01-10-2008

C.2.2.2. Length:

Ten (10) years

CDM – Executive Board

SECTION D. Environmental impacts

D.1. If required by the host Party, documentation on the analysis of the environmental impacts of the project activity:

Referring to the attached letter dated: 21st July, 2008 from Department of Economic Development & Environmental Affairs, Province of the Eastern Cape, no EIA is required in the case of the Renewable Energy Project – MTO Boskor.

D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

SECTION E. Stakeholders' comments

E.1. Brief description how comments by local stakeholders have been invited and compiled:

Notification of a public hearing meeting were posted in the two major regional newspapers as follows: Knysna-Plett Herald, 13 March 2008 (circulation 4,000) Eastern Cape Herald, 10 March 2008 (circulation 30 000).
The notification included a general overview of the CDM as well as an explanation of the technical installation and is copied below.

Renewable energy project – MTO-Boskor – Stakeholder information

Background:

South Africa is currently experiencing an increase in power cuts, which is not only inconvenient for individuals but also very costly for the industry, which suffers from resulting production losses. At the end of the day power cuts hampers development in any society.

In the Sixties and until recently Boskor, a local sawmill in the Tsitsikamma, provided electricity, generated from biomass, to the settlements in the area. At its peak the facility had a maximum output of 5,5 MWe. Today, Eskom power is available, and the mill no longer utilizes its electricity generating capacity, but continues to combust biomass in order to supply thermal energy to the drying kilns.
The CDM project:

The basic idea with the project is to refurbish the boilers and restart energy production in terms of electricity, using biomass derived from wood residuals from the Boskor sawmill and the nearby plantations. This renewable energy project aims initially at producing 2.5 MWe delivered to the national grid. The power generated will technically replace power produced based on fossil fuels (coal), hence

saving CO_2 emissions to the benefit of the climate. At the same time it will help to increase power production in South Africa. This project will also help to reduce the build-up of sawdust and other wood residuals which, through slow decomposition, releases methane gas (a rather aggressive green house gas) into the atmosphere. When this fuel resource is used for power production, methane emissions will be avoided to the benefit of the global climate.

Summary

- The CHP plant is on the premises of Boskor sawmill in existing buildings. New constructions will be minimal. An existing boiler and smoke stack will be replaced.
- The consumption of biomass for the power production will be based on wood residuals from the saw mill and woodchips produced in the plantations. It will not affect harvesting of round timber.
- No increase in noise levels is envisaged as additional chipping of wood will take place in the plantations.
- The traffic to and from Boskor will increase slightly due to additional supplies of wood chips from the plantations.
- There will be no change in the type of emissions from the saw mill except for higher quantities relating from combustion of wood for the power production. Emissions from the existing plant all meet the required environmental standards and South African legislation.

Stakeholder meeting and information session

MTO herby invite interested parties to a **Stakeholder meeting and information session** at the **Community Hall in Boskor on the 3rd April at 17:00 (5 p.m.)**. To facilitate planning we request all affected parties, who would like to attend the meeting, to notify Boskor before close of business in the 1st April 2008. The contact person is **Evelyn Moolman**, Tel: **0422811611.** Should you have any comments and cannot attend the meeting, please mail us your remarks to **preyneke@silvae.co.za** no later than the 2nd of April 2008.

Notification was also posted at the local community hall. Due to the remoteness of the location only a small number of interested and affected parties (I&APs) were registered.

Two requests for registration were submitted via email. These included the Plettenberg Bay Community Environment Forum (www.gardenroute.co.za/enviroforum /) represented by Mrs. Clair Craxton and the Wildlife & Environment Society of South Africa represented by conservation officer Mr. Morgan Griffiths in Port Elizabeth. The receipt of these enquiries was encouraging and indicative of the wide geographic range covered by the printed notification – Port Elizabeth being some 170 km distant.

Comments by stakeholders at the meeting were recorded. The electronic comments (email) have been noted and stored. All I&APs are listed on a common email address list.

E.2. Summary of the comments received:

The comments received at the public hearing were largely positive given the important contribution the project would make in stabilising the supply of electricity on a long and remote transmission line. This was to be expected as almost all the participants were related to the business in some form.

Independent environmental consultant Karen Kirkman made a comment on the intensity of the biomass in the forest and the possible effect an excessive removal of organic matter could have on soil and growth properties.

Comments from the Wildlife and Environment Society of South Africa (WESSA), while being supportive of the concept in general, were strongly concerned with any environmental impact it might have on the surroundings. As such, questions were posed as to considerations to Air Quality, Fly Ash (and probably bottom ash), Water Quality, Socio-Economic (in terms of the project benefits the immediate community) and Fire Protection.

E.3. Report on how due account was taken of any comments received:

The few comments received have been filed together with contact details lodged in connection with the stakeholder meeting.

Comments were noted with a response being that project development would take place within the stipulations of the licence issued by the National Energy Regulator of South Africa (NERSA - www.nersa.org.za), the regulations embodied in the National Environmental Management Act of 1998 (NEMA), and the NEMA Environmental Impact Assessment Regulations, as well as the Forest Stewardship Council's (FSC) criteria on sustainable forest management.

Annex 1

CONTACT INFORMATION ON PARTICIPANTS IN THE PROJECT ACTIVITY

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Represented by:	
Title:	
Salutation:	
Last Name:	
Middle Name:	
First Name:	
Department:	

Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	

Annex 2

INFORMATION REGARDING PUBLIC FUNDING

Annex 3

BASELINE INFORMATION

Baseline information was obtained from the Eskom CDM Resource Centre (http://www.eskom.co.za/live/content.php?Item_ID=4226)

Annex 4

MONITORING INFORMATION

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