

MONITORING REPORT (CDM-MR)*
Version 1 – IN EFFECT AS ON 28/09/2010

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* as contained within the document entitled "Guidelines for completing the monitoring report form (CDM-MR)" (EB 54 meeting report, annex 34).

Monitoring Report
Version Number 03, 14/10/2011
Babanpur, Killa and Sahoke Mini Hydroelectric Projects
Reference No. UNFCCC 0329
Fifth Monitoring Report 01/04/2010 to 31/07/2011(both days including)

SECTION A. General description of the project activity

A.1. Brief description of the project activity :>>

>>

Three Mini Hydroelectric Projects (MHP) aggregating to 3.75 MW at Babanpur, Killa and Sahoke on the Kotla Branch Canal, District Sangrur, Punjab, India have been set up. Mini Hydroelectric Project at Babanpur (1MW) was commissioned in July 2004, Killa (1.75MW) was commissioned in November 2005 and Sahoke (1MW) was commissioned in October 2006. The plants are operating as described in the PDD.

The purpose of the project activity is to generate electricity by utilizing water flowing through the existing canal system as a renewable energy resource to meet the ever-increasing demand of energy in the region. The development of the project activity contemplates the production of clean hydroelectric power that will contribute to reduce CO₂ emissions, which would have occurred otherwise, in absence of these projects.

1 MW hydroelectric power plant at Babanpur, 1.75 MW hydroelectric power plant at Killa and 1 MW hydroelectric power plant at Sahoke of this project activity generate electricity and sell it to the state utility i.e. Punjab State Electricity Board.

These three plants are of low head, canal drop based mini hydroelectric projects (Projects). The Projects are canal based renewable hydroelectric generating plants, which includes forebay, intake, power house, draft tube, turbine and tailrace. The component plants do not involve any type of displacement, rehabilitation or relocation.

The Projects are generating electricity successfully by converting the potential of kinetic energy of the canal water and the renewable electricity produced is fed into the Punjab State Electricity Board Grid thereby replacing the equivalent amount of electricity produced from thermal stations and thus reducing green house gas emission.

Equipment Details:

The Projects were completed with major equipment supplied by the suppliers as under:

SN	MHP	Equipment	Quantity	Capacity	Manufacturer
1	Babanpur	Turbine & its accessories	2	500 kW	HPP Energy India Private Limited, New Delhi
		Induction Generator	2	500 kW	Kirloskar Electricals Co. Ltd.

SN	MHP	Equipment	Quantity	Capacity	Manufacturer
2	Killa	Turbine & its accessories	2	875 kW	Boving Fouress Limited, Bangalore
		Synchronous Generator	2	875 kW	Marelli Motori(Italy)
3	Sahoke	Turbine & its accessories	1	1000 kW	Boving Fouress Limited, Bangalore
		Synchronous Generator	1	1000 kW	Marelli Motori(Italy)

The Projects were implemented and operated as planned and described in the Project Design Document (PDD).

During the present monitoring period i.e. 01/04/2010 to 31/07/2011, the net power exported to the grid by the three plants is 28.539 Million kWh, which correspondence to 26,883 tCO₂ emission reduction in the monitoring period.

A.2. Project Participants

>>

Kotla Hydro Power Private Limited

The name of the Company has been changed from “Kotla Hydro Power Limited” to “Kotla Hydro Power Private Limited”. The fresh certificate of incorporation and Host Country approval dated April 02, 2007 for the same has been received by the project activity. The records at CDM registry with respect to the revised modalities of communication signed by the all Project Participant have been updated.

Name of Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Kindly indicate if the Party wishes to be considered as a project participant (Yes/No)
India (host)	Private entity - Kotla Hydro Power Private Limited	No

A.3. Location of the project activity:

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MHP Babanpur : The project is located at Kotla Branch Canal

Latitude : 30°24 ' 51 N Longitude : 75°52 ' 41 E
Town : Malerkotla
District : Sangrur
State : Punjab
Country : India

MHP Killa	: The project is located at Kotla Branch Canal		
Latitude	: 30°19 ' 37 N	Longitude	: 75°43 ' 30 E
Town	: Malerkotla		
District	: Sangrur		
State	: Punjab		
Country	: India		
MHP Sahoke	: The project is located at Kotla Branch Canal		
Latitude	: 30°11 ' 16 N	Longitude	: 75°34 ' 39 E
Town	: Malerkotla		
District	: Sangrur		
State	: Punjab		
Country	: India		

A.4. Technical description of the project

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The Projects consists of 3 small hydro power plants i.e. Babanpur, Killa & Sahoke utilizing the potential and kinetic energy of the canal water to generate electricity.

Babanpur: The powerhouse comprises of two induction generators of capacity 500 kW each coupled to two numbers of vertical Semi-Kaplan turbines. The power is generated at a voltage of 415V, which is further stepped-up to 11kV to match the nearest substation voltage level.

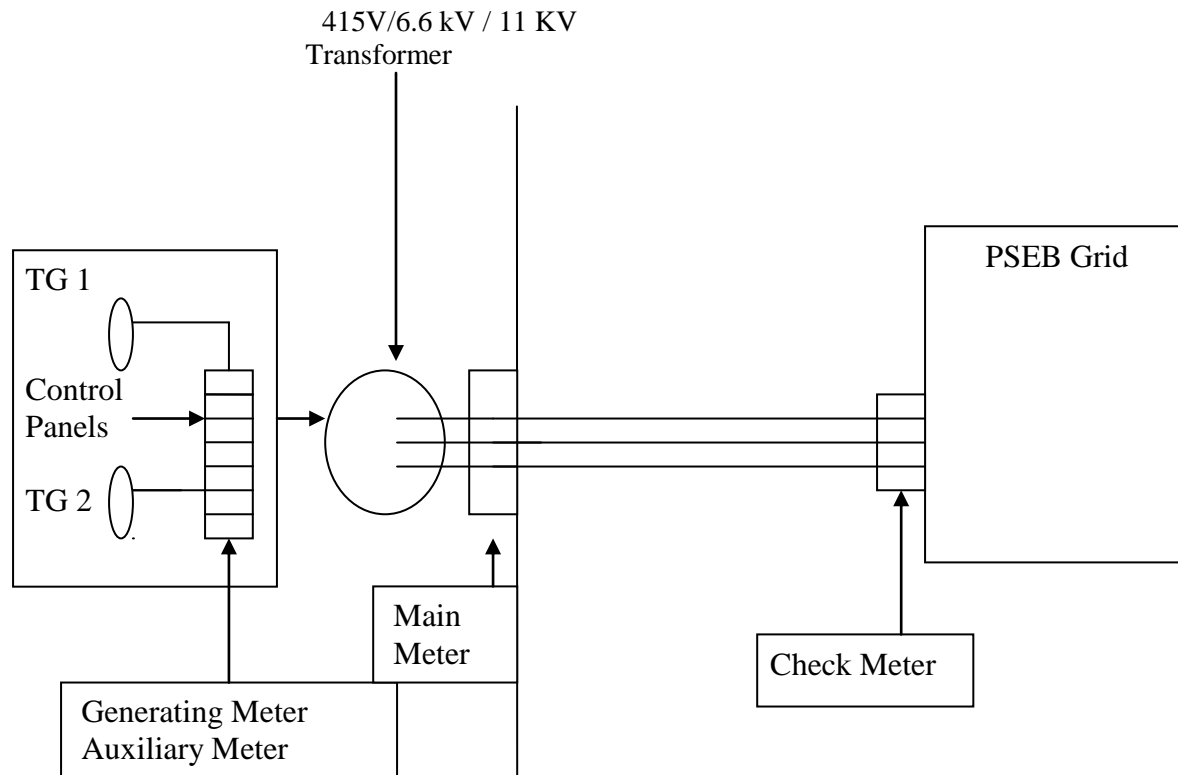
Killa: The powerhouse comprises of two synchronous generators of capacity 875 kW each coupled to two numbers of vertical Full-Kaplan turbines. The power is generated at a voltage of 6.6 kV, which is further stepped-up to 11kV to match the nearest substation voltage level.

MHP Sahoke: The powerhouse comprises of one synchronous generators of capacity 1000 kW coupled to vertical Full-Kaplan turbines. The power is generated at a voltage of 6.6 kV, which is further stepped-up to 11kV to match the nearest substation voltage level.

The principal components of each scheme are:

- Forebay and intake:** Forebay is partly trapezoidal and RCC trough section where the water is diverted towards the powerhouse upon closure of main canal gates via the intake.
- Power House:** A semi outdoor type power house has been provided to house the turbines, generator, and related electro-mechanical equipment.
- Draft Tube:** RCC draft tube has been provided to convey the tail water emerging from discharge side of the turbine to the main canal via tailrace channel.
- Turbine:** Vertical Semi Kaplan with siphon intake has been provided at Babanpur while Vertical Full Kaplan has been provided at Killa and Sahoke.
- Tailrace:** The discharge emerging out of the draft tubes is carried back to the main canal on downstream of the project by trapezoidal shaped tailrace channel connecting draft tubes exit to the main canal.

- f) **Switchyard:** Surface type switchyard has been provided with necessary equipment for interfacing with the grid.



Note: Control panels comprise of Relays, Breakers, Synchronous, Generation Meters and Auxiliary Meters.

A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity

>>
 Type I : Renewal Energy Projects
 Category : I.D. Renewable Electricity Generation for a Grid
 Version : 07

A.6. Registration date of the project activity:

>>
 30/04/2006

A.7. Crediting period of the project activity and related information (start date and choice of crediting period):

>>
 Crediting period for this project activity is 01/07/2004 to 30/06/2014 (Fixed).

Current monitoring report covers the fifth monitoring period associated with the project activity. Details of previous monitoring reports are given in the following table:

Summary of Previous Monitoring Reports

Monitoring Report	Monitoring Period (both days included)		Status
	From	To	
First	01/07/2004	31/03/2006	Successful Issuance
Second	01/04/2006	30/04/2007	Successful Issuance
Third	01/05/2007	30/06/2008	Successful Issuance
Fourth	01/07/2008	31/03/2010	Successful Issuance

The current monitoring period covered in this monitoring report is from 01/04/2010 to 31/07/2011 (both days included). This monitoring report does not cover any period of time covered by the previous monitoring reports.

A.8. Name of responsible person(s)/entity(ies):
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Name : Amit Kumar Agarwal
Contact No. : +919910107544
Email : akagarwal@polyplex.com

SECTION B. Implementation of the project activity

B.1. Implementation status of the project activity

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The projects were completed as planned and described in the Project Design Document (PDD).

The projects are in operation continuously (with outages – forced & planned) at Babanpur (1 MW) since July 2004, at Killa (1.75 MW) since November 2005 and at Sahoke (1 MW) since October 2006.

Details of down time from 01/04/2010 to 31/07/2011:

Project Site	Down Time (In Hrs.)
Babanpur	3154
Killa	3155
Sahoke	2755

B.2. Revision of the monitoring plan

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The monitoring plan has not been revised.

B.3. Request for deviation applied to this monitoring period

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Not applicable

B.4. Notification or request of approval of changes

>>

Not applicable

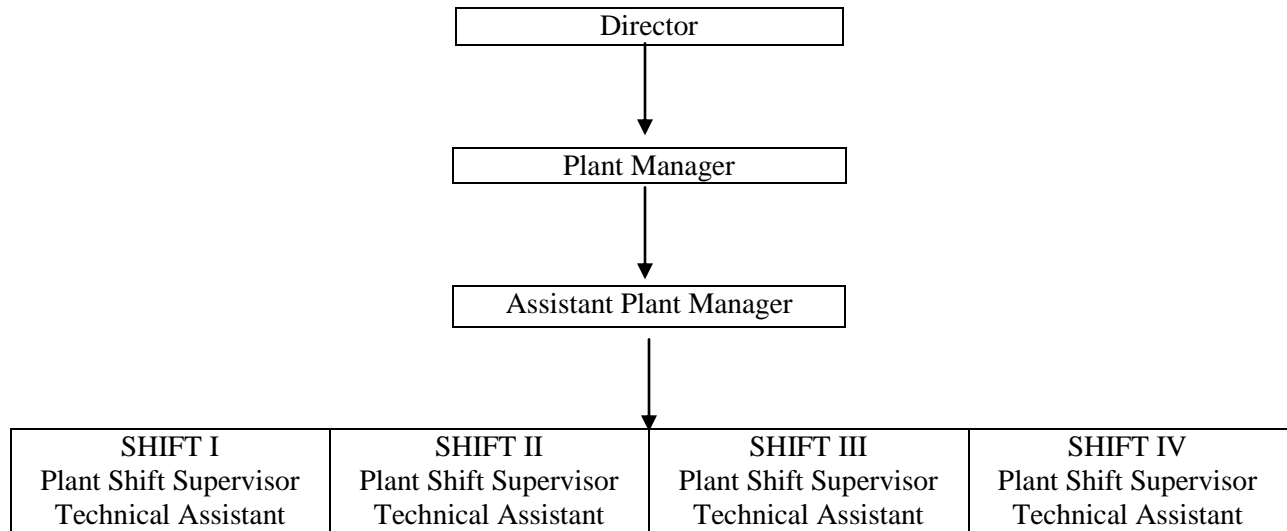
SECTION C. Description of the monitoring system

For this project activity, the monitoring systems and procedures was followed as described below:

Energy:

- i. The Energy exported (kWh) and Energy imported (kWh) at the interconnection point have been measured by the bidirectional meters (i.e. Trivector Meters) installed at the interconnection points at all 3 (three) project sites.
- ii. The Net Saleable Energy (Net electricity exported to the grid) has been calculated as a difference between energy exported and energy imported. It is based on monthly joint meter readings.
- iii. Monthly joint meter readings were taken at interconnection point and certified by representatives of Kotla Hydro Power Private Limited (KHPPL) and the purchaser i.e. Punjab State Electricity Board (PSEB).
- iv. The joint meter readings were used to raise invoice for sale of net energy to PSEB.
- v. The energy generated has been measured by the energy meters installed at the generation point on an hourly basis.
- vi. The auxiliary energy consumption has been measured by the auxiliary energy consumption meters installed at each of the plant sites on an hourly basis.
- vii. The data of the aforesaid parameters are recorded on hourly basis which are summed into a daily reading.
- viii. The hourly reading of electricity generation and auxiliary consumption were aggregated to daily and monthly readings.
- ix. Monthly reports stating the energy exported, energy imported, energy generated and auxiliary energy consumption were prepared by shift-in-charge and verified by plant managers.
- x. The finance department cross checked the data provided by plant managers.

The Organizational structure responsible for monitoring the various parameters as per Monitoring Plan is as below:-



The Hourly data is monitored and recorded in the log books by the Shift Staff comprising of Plant Shift Supervisor and Technical Assistant. The daily data is checked and countersigned by the Assistant Plant Manager. The daily and monthly data is checked and verified by the Plant Manager. The data is audited annually by the auditor of the Company having financial background.

SECTION D. Data and parameters**D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors**

Data / Parameter:	Grid Emission Factor
Data Unit:	kg of CO ₂ / kWh
Description:	The Grid Emission Factor has been calculated as the weighted average of the operating Margin Emission Factor (EF _{OM}) and the Build Margin Emission Factor (EF _{BM}).
Source of data used:	Northern Region Grid's permission from Central Electricity Authority
Value(s):	0.942
Data used for Baseline/Project/Leakage emission calculation)	Baseline emission calculations
Additional comment:	This parameter is fixed ex-ante for the full crediting period

D.2 Data and parameters monitored				
Data / Parameter:	Energy exported			
Data unit:	kWh			
Description:	Energy Exported to the grid			
Measured /Calculated /Default:	Measured			
Source of data:	Main / Trivector Meter			
Value(s) of monitored parameter:	Babanpur	Killa	Sahoke	Total
	7,386,970	12,802,090	8,397,540	28,586,600
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emissions			
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Particulars	Babanpur	Killa	Sahoke
	Type	L&T Electronic Bidirectional Trivector Meter	L&T Electronic Bidirectional Trivector Meter	L&T Electronic Bidirectional Trivector Meter
	Accuracy class	(±)0.50%	(±)0.50%	(±)0.50%
	Serial number	05271088	04223074	04223078
	Calibration frequency	6 month	6 month	6 month
	Calibrations during monitoring period	25/02/2010 23/08/2010 18/02/2011 26/07/2011	25/02/2010 24/08/2010 16/02/2011 26/07/2011	25/02/2010 24/08/2010 16/02/2011 01/08/2011
	Validity	25/01/2012	25/01/2012	31/01/2012
Measuring/ Reading/ Recording frequency:	Monthly			
Calculation method (if applicable):	Not Applicable			
QA/QC procedures applied:	<p>As per the registered PDD the general principles for monitoring the energy exported to the grid are based on:</p> <p>Monthly joint meter reading of main meter installed at interconnection point shall be taken and signed by authorised official of KHPPL and PSEB on any day of the first week of every month as mutual consent. Records of this joint meter reading would be maintained by KHPPL.</p> <p>The principle of Frequency, Data recoding and Reliability as mentioned in the PDD are strictly adhered to. The Main Meters and Check Meters were subject to calibration every six months by Punjab State Electricity Board.</p>			

Data / Parameter:	Energy imported
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Data unit:	kWh				
Description:	Energy imported from the grid				
Measured /Calculated /Default:	Measured				
Source of data:	Main / Trivector Meter				
Value(s) of monitored parameter:	Babanpur	Killa	Sahoke	Total	
	14,680	18,180	15,020	47,880	
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emissions				
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Particulars	Babanpur	Killa	Sahoke	
	Type	Electronic Bidirectional Trivector Meter	Electronic Bidirectional Trivector Meter	Electronic Bidirectional Trivector Meter	
	Accuracy class	(±)0.50%	(±)0.50%	(±)0.50%	
	Serial number	05271088	04223074	04223078	
	Calibration frequency	6 month	6 month	6 month	
	Calibrations during monitoring period	25/02/2010 23/08/2010 18/02/2011 26/07/2011	25/02/2010 24/08/2010 16/02/2011 26/07/2011	25/02/2010 24/08/2010 16/02/2011 01/08/2011	
	Validity	25/01/2012	25/01/2012	31/01/2012	
	Measuring/ Reading/ Recording frequency:	Monthly			
Calculation method (if applicable):	Not Applicable				
QA/QC procedures applied:	<p>As per the registered PDD the general principles for monitoring the energy imported from the grid are based on:</p> <p>Monthly joint meter reading of main meter installed at interconnection point shall be taken and signed by authorised official of KHPPL and PSEB on any day of the first week of every month as mutual consent. Records of this joint meter reading would be maintained by KHPPL.</p> <p>The principle of Frequency, Data recoding and Reliability as mentioned in the PDD are strictly adhered to. The Main Meters and Check Meters were subject to calibration every six months by PSEB.</p>				

Data / Parameter:	Net saleable energy			
Data unit:	kWh			
Description:	Net salable energy to grid			
Measured /Calculated /Default:	Calculated			
Source of data:	Main Meter / PSEB Monthly Bills			
Value(s) of monitored parameter:	Babanpur	Killa	Sahoke	Total
	7,372,290	12,783,910	8,382,520	28,538,720
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emissions			
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	As this is calculated, this section is not applicable for this monitoring parameter.			
Measuring/ Reading/ Recording frequency:	Monthly			
Calculation method (if applicable):	Net Saleable Energy = Energy exported – Energy imported			
QA/QC procedures applied:	<p>Net saleable energy is the net exported energy to the grid which is the difference of energy exported and energy imported. Joint meters reading are taken from the main meter and check meter every month to arrive at net saleable energy.</p> <p>The main & check meters are subject to calibration every six months.</p>			

Data / Parameter:	Energy generated			
Data unit:	kWh			
Description:	Gross energy generated			
Measured /Calculated /Default:	Measured			
Source of data:	Generation Meters			
Value(s) of monitored parameter:	Babanpur	Killa	Sahoke	Total
	7,714,613	13,215,151	8,636,064	29,565,828
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emissions			
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)				
	Particulars	Babanpur	Killa	Sahoke
	Type	Unit 1 & 2:Rishabb Digital Energy Meter	Unit 1: Minsun Digital Energy Meter Unit 2: Selec Digital Energy Meter	Minsun Digital Energy Meter
	Accuracy class	(+) 0.5%	(+) 0.5% (+) 1.0%	(+) 0.5%
	Serial No.	04/12/2288	6851019	68B0511

	(Unit-I)								
	Serial No. (Unit-II)	05/09/4126	B : 0910*	_____					
	Calibration Frequency	6 month	6 month	6 month					
	Calibration during monitoring period	31/12/2009	01/01/2010	01/01/2010					
		29/06/2010	29/06/2010	29/06/2010					
		28/12/2010	28/12/2010	28/12/2010					
		26/06/2011	26/06/2011	26/06/2011					
	Validity	25/12/2011	25/12/2011	25/12/2011					
	Details service period of old and new Killa unit II Meter for the above generation meters are as follows:-								
	<table><tr><td>Meter Sr. No.</td><td>Service period</td></tr><tr><td>23653 TMD 107</td><td>01/04/2010 to 27/12/2011</td></tr><tr><td>B : 0910</td><td>28/12/2011 to 31/07/2011</td></tr></table>				Meter Sr. No.	Service period	23653 TMD 107	01/04/2010 to 27/12/2011	B : 0910
Meter Sr. No.	Service period								
23653 TMD 107	01/04/2010 to 27/12/2011								
B : 0910	28/12/2011 to 31/07/2011								

Measuring/ Reading/ Recording frequency:	Hourly
Calculation method (if applicable):	Not Applicable
QA/QC procedures applied:	The readings of the energy generated are taken from the meters installed at generation point. These are subject to calibration every six months.

*Indicates a replacement of meter, detail are given in the following table:

Site	Meter Type	Type	Accuracy Class	Old Meter No.	Date of last calibration	New Meter No.	Date of Change
Killa	Generation Meter –Unit-II	Tiny Master	(+) 0.5%	23653 TMD 107	28/12/2010	B : 0910	28/12/2010

Data / Parameter:	Auxiliary energy consumption			
Data unit:	kWh			
Description:	Auxiliary energy consumed for running the plant			
Measured /Calculated /Default:	Measured			
Source of data:	Auxiliary Meters			
Value(s) of monitored parameter:	Babanpur	Killa	Sahoke	Total

	69,248	123,781	107,351	300,380					
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	Baseline emissions								
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	Particulars	Babanpur	Killa	Sahoke					
	Type	Rishabb	Enercon	Selec					
	Accuracy class	(±)0.5%	(±)0.5%	(±)1.0%					
	Serial no.	08/06/0915	57343/1598-3804	B : 0911*					
	Calibration frequency	6 month	6 month	6 month					
	Calibrations during monitoring period	31/12/2009	01/01/2010	01/01/2010					
		29/06/2010	29/06/2010	29/06/2010					
		28/12/2010	28/12/2010	28/12/2010					
		26/06/2011	26/06/2011	26/06/2011					
	Validity	25/12/2011	25/12/2011	25/12/2011					
Details service period of old and new Sahoke Meter for the above generation meters are as follows:- <table><tr><td>Meter Sr. No.</td><td>Service period</td></tr><tr><td>54706/977-3004</td><td>01/04/2010 to 27/12/2011</td></tr><tr><td>B : 0910</td><td>28/12/2011 to 31/07/2011</td></tr></table>				Meter Sr. No.	Service period	54706/977-3004	01/04/2010 to 27/12/2011	B : 0910	28/12/2011 to 31/07/2011
Meter Sr. No.	Service period								
54706/977-3004	01/04/2010 to 27/12/2011								
B : 0910	28/12/2011 to 31/07/2011								
Measuring/ Reading/ Recording frequency:	Hourly								
Calculation method (if applicable):	Not Applicable								
QA/QC procedures applied:	Auxiliary energy consumption readings are recorded at the auxiliary meters installed in the panel. These are subject to calibration every six months.								
QA/QC procedures applied:	The readings of the energy generated are taken from the meters installed at generation point. These are subject to calibration every six months.								

*Indicates a replacement of meter, detail are given in the following table:

Site	Meter Type	Type	Accuracy Class	Old Meter No.	Date of last calibration	New Meter No.	Date of Change
Sahoke	Auxiliary	Enercon	(<u>±</u>)0.5%	54706/977-3004	28/12/2010	B : 0911	28/12/2010

SECTION E. Emission reduction calculation

E.1. Baseline emissions calculation

>>

The formula used for the determination of baseline emissions which is line with the PDD section E:

Baseline Emissions (tCO₂/yr) = Emission Coefficient (EFy) (kg CO₂/kWh) x Net Saleable Energy (kWh) / 1000

Code	Description	Formula	Unit	Value
A	Energy Exported		kWh	28,586,600
B	Energy Imported		kWh	47,880
C	Net Saleable Energy	$C = A - B$	kWh	28,538,720
D	Carbon Emission Factor as per the baseline adopted		kg CO ₂ /kWh	0.942
E	Baseline Emissions	$E = (C * D) / 1000$	ton CO ₂	26,883

E.2. Project emission calculation

>>

No project emissions are associated with the project activity during this monitoring period. This is also in line with the PDD and methodology.

E.3. Leakage calculation

>>

As the energy generating equipment is not transferred from another activity or the existing equipment is also not transferred to another activity, leakage is not considered. The same is in line with the methodology and the registered PDD.

E.4. Emission reductions calculation

>>

Baseline Emissions : 26,883
Project Emissions : NIL
Emissions Reductions : Baseline emissions – Project emission

$$\begin{aligned} &= 26,883 - 0 \\ &= 26,883 \text{ tCO}_2 \end{aligned}$$

E.5. Comparison of actual emission reductions with estimates in the CDM-PDD

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Item	Value applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period
Emission reductions (tCO ₂)	30,698 ¹	26,883

¹ The ex-ante emission reduction from the registered project activity is 23,024 tCO per annum (i.e.12 months). The operating months for the monitoring period was 16. The extrapolated emission reduction for the monitoring period is calculated by using multiplying with a factor of 16/12, i.e. 30,698 tCO₂e.

E.6. Remarks on difference from estimated value in the PDD

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The actual emission reductions achieved during this monitoring period is less than the estimated figure in the registered PDD.

Annexure - I

The month wise data on energy generated is given hereunder. The monthly data is based on the hourly reading taken at the meters installed at the generation end

Energy Generated (kWh)

Billing Month	Year	Babanpur	Killa	Sahoke	Total
Apr	2010	282,188	541,610	366,890	1,190,688
May	2010	591,056	961,500	621,000	2,173,556
Jun	2010	829,055	1,307,824	796,374	2,933,253
Jul	2010	377,112	633,215	586,832	1,597,159
Aug	2010	704,163	1,058,042	551,664	2,313,869
Sep	2010	345,471	577,174	360,630	1,283,275
Oct	2010	290,858	489,590	367,563	1,148,011
Nov	2010	301,780	469,726	152,955	924,461
Dec	2010	576,923	1,077,771	705,626	2,360,320
Jan	2011	511,924	972,172	614,038	2,098,134
Feb	2011	471,935	934,402	635,357	2,041,694
Mar	2011	604,322	1,058,962	617,797	2,281,081
Apr	2011	172,695	274,924	361,562	809,181
May	2011	497,508	806,346	620,131	1,923,985
Jun	2011	566,335	987,203	623,300	2,176,838
Jul	2011	591,288	1,064,690	654,345	2,310,323
Total		7,714,613	13,215,151	8,636,064	29,565,828

Annexure - II

The month-wise data on auxiliary energy consumption is given hereunder. The monthly data is based on hourly reading taken at the auxiliary meters installed at the panel:

Auxiliary Energy Consumption (kWh)

Billing Month	Year	Babanpur	Killa	Sahoke	Total
Apr	2010	3,520	7,572	5,697	16,789
May	2010	5,269	10,034	8,615	23,918
Jun	2010	6,024	10,168	8,473	24,665
Jul	2010	3,828	7,328	7,446	18,602
Aug	2010	5,782	9,333	7,056	22,171
Sep	2010	3,497	6,234	5,361	15,092
Oct	2010	2,396	4,328	4,796	11,520
Nov	2010	3,042	5,369	3,314	11,725
Dec	2010	4,316	7,935	7,549	19,800
Jan	2011	3,851	6,943	6,179	16,973
Feb	2011	3,787	7,112	5,951	16,850
Mar	2011	4,460	7,370	6,224	18,054
Apr	2011	3,192	5,774	5,662	14,628
May	2011	5,189	9,044	8,455	22,688
Jun	2011	5,607	9,798	8,132	23,537
Jul	2011	5,488	9,439	8,441	23,368
Total		69,248	123,781	107,351	300,380

The energy generated data and auxiliary energy consumption data is not used for calculation of emission reductions as the calculation of emission reductions is based on Net Saleable energy i.e. the difference of energy exported and energy imported.

Month-wise data on Net Saleable Energy for the monitoring period is given as under:

As per the Project Design Document, Emission reductions are to be calculated based on the energy exported minus energy imported during shut-down and start-ups by the power plant.

Net Saleable Energy (kWh)

Billing Month	Year	Energy Exported				Energy Imported				Net Saleable Energy
		Babanpur	Killa	Sahoke	Total	Babanpur	Killa	Sahoke	Total	
Apr	2010	270,570	524,880	356,180	1,151,630	1,670	1,190	1,360	4,220	1147410
May	2010	567,350	934,660	602,780	2,104,790	790	1,130	640	2,560	2102230
Jun	2010	795,980	1,276,860	775,420	2,848,260	120	80	60	260	2848000
Jul	2010	360,820	612,710	570,660	1,544,190	1,410	1,760	960	4,130	1540060
Aug	2010	673,910	1,024,250	536,920	2,235,080	80	120	1,300	1,500	2233580
Sep	2010	331,060	558,890	350,680	1,240,630	2,250	2,820	1,900	6,970	1233660
Oct	2010	279,660	475,250	358,160	1,113,070	1,850	3,060	1,540	6,450	1106620
Nov	2010	288,930	452,400	148,580	889,910	1,410	2,210	2,560	6,180	883730
Dec	2010	555,110	1,043,670	686,940	2,285,720	140	30	380	550	2285170
Jan	2011	483,370	941,470	597,440	2,022,280	1,010	1,110	680	2,800	2019480
Feb	2011	454,640	904,400	618,160	1,977,200	120	90	60	270	1976930
Mar	2011	583,330	1,025,760	601,240	2,210,330	260	420	340	1,020	2209310
Apr	2011	160,480	262,950	350,800	774,230	1,870	2,160	1,160	5,190	769040
May	2011	472,770	779,250	602,680	1,854,700	1,060	1,290	1,320	3,670	1851030
Jun	2011	541,070	954,590	605,400	2,101,060	260	190	320	770	2100290
Jul	2011	567,920	1,030,100	635,500	2,233,520	380	520	440	1,340	2232180
Total		7,386,970	12,802,090	8,397,540	28,586,600	14,680	18,180	15,020	47,880	28,538,720