Monitoring report form for CDM project activity
(Version 08.0)

Complete this form in accordance with the instructions attached at the end of this form.

MONITORING REPORT			
Title of the project activity	Biomass Based Independent Power Project at Malwa Power Private Limited, Mukatsar, Punjab		
UNFCCC reference number of the project activity	0331[1]		
Version number of the PDD applicable to this monitoring report	02		
Version number of this monitoring report	01		
Completion date of this monitoring report	02/07/2021		
Monitoring period number	09		
Duration of this monitoring period	01/01/2013 - 30/04/2015 (First and last dates included)		
Monitoring report number for this monitoring period	NA		
Project participants	M/s. Malwa Power Private Limited		
Host Party	India		
Applied methodologies and standardized baselines	Applied Methodology: AMS-I.D. Renewable electricity generation for a grid, Version 7[2] Standardized baselines: Not Applicable		
Sectoral scopes	Sectoral Scope: 01, Energy industries (renewable - / non-renewable sources)		
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 December 2020	Amount achieved from 1 January 2021
	Not Applicable	88,367 tCO_2e	Not Applicable
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	102,126 tCO_2e		

[1] https://cdm.unfccc.int/Projects/DB/TUEV-SUED1142618808.04/view
[2] https://cdm.unfccc.int/UserManagement/FileStorage/CDMWF_AM_YOTFZTED7EYGBTI7F2JS078AR9D3KM

SECTION A. Description of project activity

A.1. General description of project activity

>>
Malwa Power Private Limited (MPPL) was incorporated in January 2002 as a Special Purpose Vehicle for setting up biomass based power plants. MPPL has set up the biomass based power plant at district Mukatsar in state of Punjab (project activity). The project activity generates electricity and exports it to the regional grid. The major equipment of the project activity comprise a 7.5 MW bleed cum condensing type turbine and one 31.5 tons per hour (TPH) and 67 atmosphere (atm) pressure boiler.

The purpose of the project activity is to utilize surplus biomass available in the region for effective generation of electricity for supply to grid to meet the ever-increasing demand for energy in the region. The project activity reduces the Green House Gas (GHG) emissions produced by the regional grid generation mix, which is mainly dominated by fossil fuel based power plants.

The technology employed in the project activity consists of a boiler to combust biomass and generate steam that drives a turbine. The turbine is connected to a generator that converts the mechanical energy into electricity energy. Since, the GHG emissions due to the combustion of biomass are neutralized by the sequestration that took place during the growth cycle of the biomass crop, the CO_2 emissions during combustion of biomass can be ignored. Therefore, electricity is generated through sustainable means without causing any negative effect on the environment and hence the technology is environmentally safe and sound.

The project activity was synchronized with the grid on 27/04/2005 and was declared commercially operative on the same day. During the present monitoring period from 01/01/2013 – 30/04/2015 (first and last dates included) the project has reduced 88,367 tCO_2 into the atmosphere.

A.2. Location of project activity

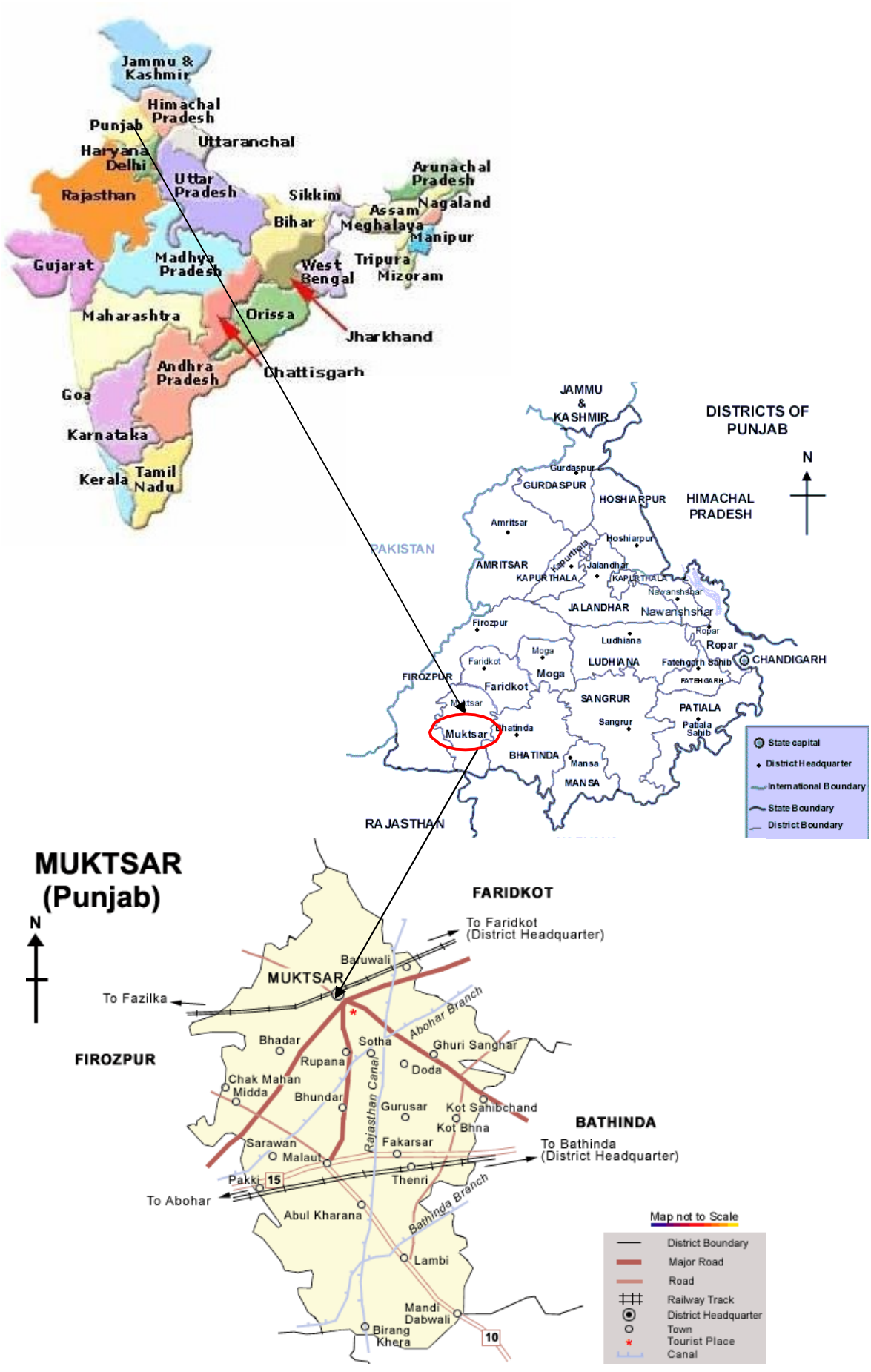
>>
The project activity has been implemented at the following location:

Village : Gulabewalla
Tehsil : Mukatsar
District : Mukatsar
State : Punjab
Country : India

GPS Coordinates at Boiler:

Latitude: 30.5511˚ N
Longitude: 74.4995˚ E

The geographical location of Mukatsar is detailed in the maps below.


Jammu & Kashmir
Himachal Pradesh
Punjab
Uttaranchal
Haryana
Delhi
Uttar Pradesh
Rajasthan
Sikkim
Arunachal Pradesh
Nagaland
Assam
Meghalaya
Manipur
Bihar
Tripura
Mizoram
Gujarat
Madhya Pradesh
West Bengal
Maharashtra
Orissa
Jharkhand
Andhra Pradesh
Chattisgarh
Goa
Karnataka
Kerala
Tamil Nadu
JAMMU & KASHMIR
DISTRICTS OF PUNJAB
N
GURDASPUR
HOSHIARPUR
HIMACHAL PRADESH
Amritsar
PAKISTAN
AMRITSAR
KAPURTHALA
JALANDHAR
Nawanshshar
Firozpur
Ludhiana
Ropar
CHANDIGARH
Moga
Faridkot
FIROZPUR
LUDHIANA
Fatehgarh Sahib
FATEHGARH
SANGRUR
PATIALA
Muktsar
Bhatinda
Sangrur
Patiala
Sahib
BHATINDA
Mansa
MANSA
RAJASTHAN
State capital
District Headquarter
International Boundary
State Boundary
District Boundary
MUKTSAR
(Punjab)
N
FARIDKOT
To Faridkot
(District Headquarter)
Baruwali
MUKTSAR
To Fazilka
Abohar Branch
FIROZPUR
Bhadar
Sotha
Ghuri Sanghar
Rupana
Doda
Chak Mahan
Midda
Bhundar
Rajasthan Canal
Gurusar
Kot Sahibchand
Kot Bhna
BATHINDA
Sarawan
Malaut
Fakarsar
To Bathinda
(District Headquarter)
Pakki
15
Thenri
To Abohar
Abul Kharana
Bathinda Branch
Lambi
Mandi Dabwali
Birang Khera
10
Map not to Scale
District Boundary
Major Road
Road
Railway Track
District Headquarter
Town
Tourist Place
Canal

A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
India	M/s. Malwa Power Private Limited (Private Entity)	No

A.4. References to applied methodologies and standardized baselines

>>
Title: AMS-I.D. - "Renewable electricity generation for a grid", Version 07[3]
Project Type I: Renewable Energy Projects
Projects Category : I.D. Grid connected renewable electricity generation

A.5. Crediting period type and duration

>>
Type of crediting period : Fixed Crediting Period
Crediting period : 01/05/2005 - 30/04/2015

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

>>
Brief description of the installed technology and equipments:

The power plant has boiler sized to produce a maximum of 31.5 TPH of steam and 7.5 MW steam turbine, which is a bleed cum condensing type machine. The steam conditions at the boiler heat outlet are a pressure of 67 atm. and temperature of 465^{0}C. Fluidized Bed Combustion type boiler has been selected, primarily due to its flexibility in fuel firing and as per the norms prescribed by Punjab Pollution Control Board. All the necessary auxiliary facilities of the power plant including Reverse Osmosis water treatment plant, cooling tower, condensate system, fuel storage and handling systems, electrical power evacuation system, ash handling system, fire fighting system, compressed air system, instrumentation and control system etc. have been provided for the power plant. The plant and equipment facilities have been designed to comply with the applicable stipulations / guidelines of statutory authorities such as State Pollution Control Board etc. Power is generated at 11 kV at the plant and is evacuated to grid at 66 kV through a 140% capacity transformer.

At 100 % capacity utilisation of boiler about 7.3 TPH of biomass (100 % biomass firing) is required. The fuel handling system has been designed for a capacity of 12 TPH. Combustion technology has been selected for the power plant, wherein biomass is burnt as fuel in a steam generator to produce high-pressure steam, which is then expanded in turbo-generators to generate power.

The major equipments installed in the project activity are as follows:

Sr. No.	Equipment	Supplier
1	Boiler Type: Fluidized Bed Combustion Capacity: 31.5 TPH, 67 atm & 465 ºC Serial No.: BDF-315	Thermax Limited, Pune
2	Turbine Type: Bleed cum condensing	M/s Triveni Engineering & Industries Ltd 12A, Peenya Industrial Area

[3] https://cdm.unfccc.int/UserManagement/FileStorage/CDMWF_AM_YOTFZTED7EYGBTI7F2JS078AR9D3KM

Sr. No.	Equipment	Supplier
	Capacity: 7.5 MW steam turbine Serial No.: 16	Bangalore, India
3	Generator Type: Brushless Synchronous Capacity: 7.5 MW Serial No.: 431798261-11-01	Bharat Heavy Electricals Ltd.

The outages in the current monitoring period are as follows:

Year	2013	2014	2015	Total
Month	Hrs	Hrs	Hrs	Hrs
Jan	417.03	29.68	77.07	4638.97
Feb	313.45	69.58	51.08	
Mar	566.73	24.58	32.80	
Apr	219.98	89.23	507.15	
May	107.73	37.55	-	
Jun	146.38	49.37	-	
Jul	311.08	91.07	-	
Aug	560.22	228.77	-	
Sep	205.27	174.30	-	
Oct	22.18	63.72	-	
Nov	30.47	49.25	-	
Dec	94.52	68.73	-	

No events or situations have occurred during the monitoring period which may impact the applicability of the methodology.

Relevant dates for the project activity:

The project activity was synchronized with the grid on 27/04/2005 and was declared commercially operative on the same day. The project activity has been in operation continuously (with outages – forced & planned) ever since.

The plant operates in three shifts of eight hours every day:
Shift A: 06:00 AM to 02:00 PM
Shift B: 02:00 PM to 10:00 PM
Shift C: 10:00 PM to 06:00 AM (next day)

For example, the plant started operation at 12:42 AM on 21/09/2009 but this was recorded in the C shift of 20/09/2009 itself.

B.2. Post-registration changes

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

>>
There has no temporary deviations from the registered monitoring plan, the applied methodologies, the applied standardized baselines or the other applied methodological regulatory documents during this monitoring period. Hence, Not Applicable

B.2.2. Corrections

>>
There has no corrections to project information or parameters fixed at the registration or renewal of crediting period of the project activity. Hence, Not Applicable

B.2.3. Changes to the start date of the crediting period

>>
There has no request for the change the start of the crediting period. Hence, Not Applicable

B.2.4. Inclusion of monitoring plan

>>
There has no post-registration change to include a monitoring plan into the PDD. Hence, Not Applicable

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

>>
There has no permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, applied standardized baseline, or other methodological regulatory documents. Hence, Not Applicable.

B.2.6. Changes to project design

>>
There has no any changes to the project design of the project activity. Hence, Not Applicable.

B.2.7. Changes specific to afforestation or reforestation project activity

>>
As the project activity is not an afforestation or reforestation project activity. Hence, Not Applicable.

SECTION C. Description of monitoring system

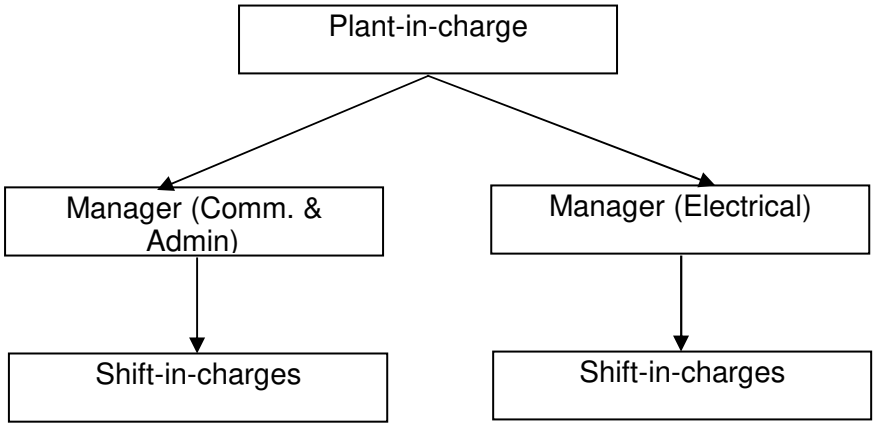
>>
The energy exported to the Punjab State Power Corporation Limited (PSPCL) is recorded from two independent set of meters - Main Meter & Check Meter. The readings from the Main Meter are used for billing purposes. In case the Main Meter goes out of operation, the reading of the backup meter (Check Meter) is used for billing. Till date only the main meter has been used for billing purposes.

The calibration and testing of monitoring equipment is being carried out regularly according to the requirements of PSPCL. Power Generation, Export & Auxiliary Consumption and fuel consumption is being recorded and verified daily by the Shift-in-charge which is thereafter approved by the Plant in-charge. Since hourly data logging is being carried out along with daily reporting, the uncertainty level associated with the monitored data used for calculating emission reductions is low.

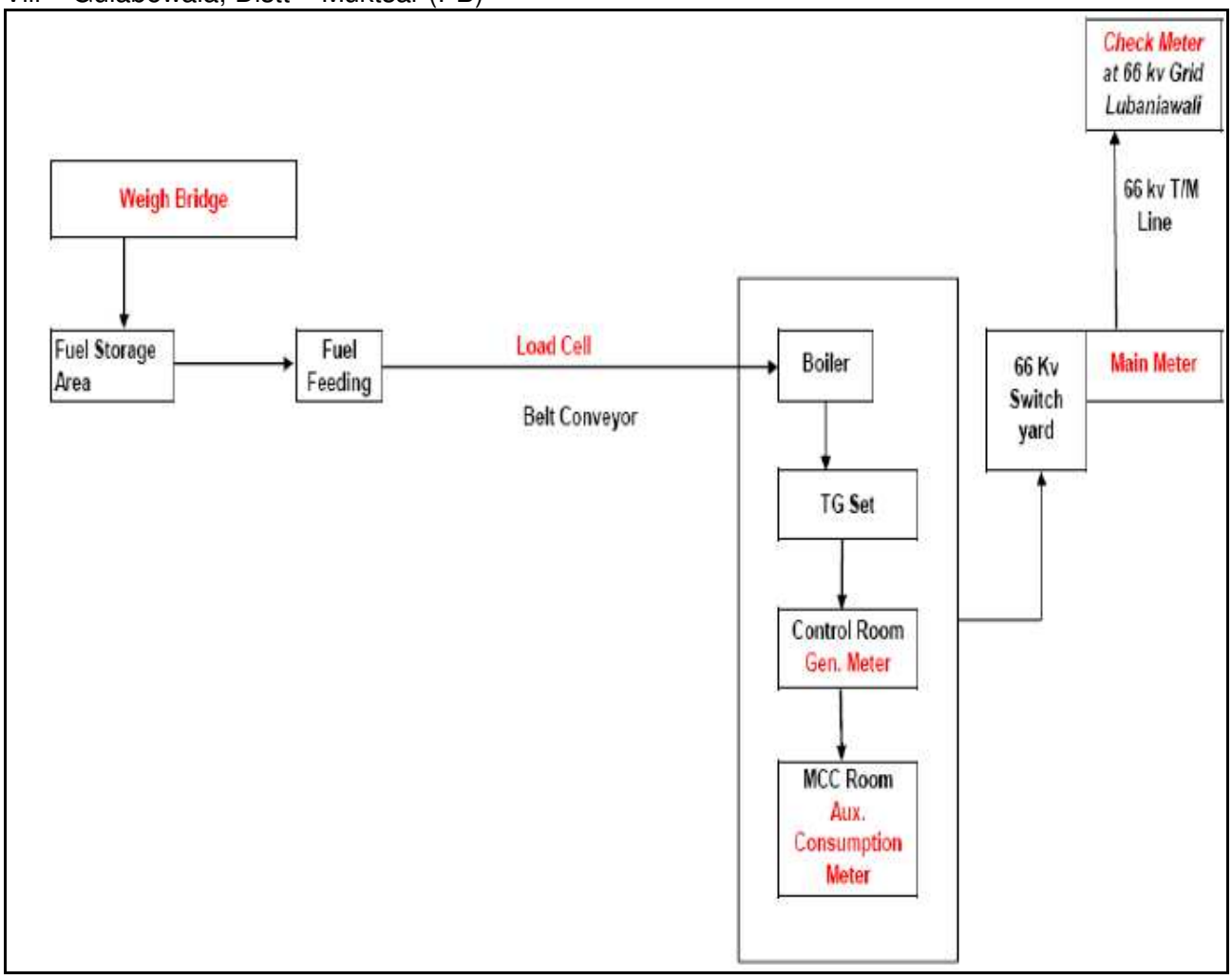
MPPL is the sole agency responsible for implementation of the monitoring plan. The Shift in-charge is responsible for the hourly data recording at generation end. Daily and monthly reports stating the generation, auxiliary consumption, and net power export are prepared by the Shift in-charge and verified by the Plant Manager. Records of the monthly joint meter reading are maintained by the Plant Manager at site as well as by PSPCL at their office.

Furthermore Internal Audits are carried out in accordance with the GHG Performance Procedures of MPPL to ensure compliance with the monitoring methodology and plan.

Organizational Structure



Single Line Diagram for Monitoring Points of 7.5 MW Power Plant of M/s Malwa Power (P) Ltd. at Vill – Gulabewala, Distt – Muktsar (PB)



SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

(Copy this table for each data or parameter.)

Data/Parameter	EF_y
Unit	tCO_2/MWh
Description	CO_2 baseline emission factor for the electricity displaced due to the project activity
Source of data	The baseline emission factor for the project activity has been calculated in the registered PDD using the power generation mix and recent capacity additions of Northern Regional electricity grid
Value(s) applied	0.942
Choice of data or measurement methods and procedures	-
Purpose of data/parameter	Baseline emission calculations
Additional comments	This parameter has been fixed ex-ante for the entire crediting period in the registered PDD.

D.2. Data and parameters monitored

(Copy this table for each data or parameter.)

Data/Parameter	Energy exported
Unit	kWh
Description	Electricity exported by the project activity to PSPCL
Measured/calculated/ default	Measured
Source of data	Monthly Joint Meter Readings taken at the interconnection point in the presence of officials of MPPL and PSPCL
Value(s) of monitored parameter	94,388,000
Monitoring equipment	Details of energy meters installed have been given in the Appendix I.
Measuring/reading/recording frequency	Recording Frequency: Monthly
Calculation method (if applicable)	Not Applicable
QA/QC procedures	The calibration test of accuracy of main and check meters is done every six months.
Purpose of data/parameter	Baseline emission calculation
Additional comments	-

Data/Parameter	Energy imported
Unit	kWh
Description	Electricity imported by the project activity from PSPCL
Measured/calculated/ default	Measured
Source of data	Monthly Joint Meter Readings taken at the interconnection point in the presence of officials of MPPL and PSPCL
Value(s) of monitored parameter	578,400
Monitoring equipment	Details of energy meters installed have been given in the Appendix I.
Measuring/reading/recording frequency	Recording Frequency: Monthly

Calculation method (if applicable)	Not Applicable
QA/QC procedures	The calibration test of accuracy of main and check meters is done every six months.
Purpose of data/parameter	Baseline emission calculation
Additional comments	-

Data/Parameter	**Net saleable energy**
Unit	kWh
Description	Net electricity exported by the project activity to PSPCL
Measured/calculated/ default	Calculated
Source of data	Monthly Joint Meter Readings taken at the interconnection point in the presence of officials of MPPL and PSPCL
Value(s) of monitored parameter	93,809,600
Monitoring equipment	Not Applicable
Measuring/reading/recording frequency	Recording Frequency: Monthly
Calculation method (if applicable)	Net saleable energy = Energy exported – Energy imported
QA/QC procedures	The calibration test of accuracy of main and check meters is done every six months.
Purpose of data/parameter	Baseline emission calculation
Additional comments	-

Data/Parameter	**Energy generated**
Unit	kWh
Description	Gross energy generated from the project activity
Measured/calculated/ default	Measured
Source of data	Log books
Value(s) of monitored parameter	108,081,100
Monitoring equipment	Details of energy meters installed have been given in the Appendix I. (**Procedure for internal testing of meters:** The energy meter is fed by two signals i.e. 110 Volt signal from voltage source and 1 amp current signal from current source. The meter on the basis of above parameters calculates the power factor and thus KW reading. The calculated KW reading by the meter is cross checked by factory calibrated independent ammeters, voltmeters and a power factor meter. The signal to the above master voltmeters, ampere meters and power factor meter is fed from the same source i.e. 110 volt from voltage source and 1 amp from current source. The calculated KW reading from the above meters is compared with KW reading shown by the energy meter. The error between the two readings reflects the accuracy of meter under trial.)
Measuring/reading/recording frequency	Recording Frequency: Hourly
Calculation method (if applicable)	Not Applicable
QA/QC procedures	The meter is checked every six months through internal testing
Purpose of data/parameter	Not used for any calculations. Demonstrates smooth operation of the power plant.

Additional comments	-

Data/Parameter	**Auxiliary energy consumption**
Unit	kWh
Description	Auxiliary energy consumption of the project activity
Measured/calculated/ default	Measured
Source of data	Log books
Value(s) of monitored parameter	12,103,010
Monitoring equipment	Details of energy meters installed have been given in the Appendix I. (**Procedure for internal testing of meters:** The energy meter is fed by two signals i.e. 110 Volt signal from voltage source and 1 amp current signal from current source. The meter on the basis of above parameters calculates the power factor and thus KW reading. The calculated KW reading by the meter is cross checked by factory calibrated independent ammeters, voltmeters and a power factor meter. The signal to the above master voltmeters, ampere meters and power factor meter is fed from the same source i.e. 110 volt from voltage source and 1 amp from current source. The calculated KW reading from the above meters is compared with KW reading shown by the energy meter. The error between the two readings reflects the accuracy of meter under trial.)
Measuring/reading/recording frequency	Recording Frequency: Hourly
Calculation method (if applicable)	Not Applicable
QA/QC procedures	The meter is checked every six months through internal testing
Purpose of data/parameter	Not used for any calculations. Demonstrates smooth operation of the power plant.
Additional comments	-

Data/Parameter	**Biomass Quantity**
Unit	MT
Description	Quantity of biomass consumed in the project activity
Measured/calculated/ default	Measured
Source of data	Log books
Value(s) of monitored parameter	170,881
Monitoring equipment	Details of energy meters installed have been given in the Appendix I.
Measuring/reading/recording frequency	Recording Frequency: Daily A fuel stock inventory is maintained at the plant which contains a record of the amount of each type of biomass purchased based on invoices / receipts from fuel contractors after weighing with the electronic weigh bridge installed at project site. The amount of biomass fed into the boiler is also recorded based on readings of the online meter load cell installed on the conveyor belt prior to feeding the biomass into the boiler.
Calculation method (if applicable)	Not Applicable
QA/QC procedures	The bomb calorimeter can be used to measure calorific value of a wide range of solid as well as liquid fuels and since it is standardized according to procedures in the manufacturer's manual every time it is used, the uncertainty level of the monitored data is low.

Purpose of data/parameter	Not used for any calculations. Demonstrates smooth operation of the power plant.
Additional comments	-

Data/Parameter	**Coal Quantity**
Unit	MT
Description	Quantity of coal used in the project activity
Measured/calculated/ default	Measured
Source of data	Log books
Value(s) of monitored parameter	0
Monitoring equipment	Not Applicable
Measuring/reading/recording frequency	Recording Frequency: Daily
Calculation method (if applicable)	Not Applicable
QA/QC procedures	Coal has not been used during the current monitoring period. Further, the power plant does not have a coal mill required to grind the coal for use in the boiler.
Purpose of data/parameter	Calculation of the project emissions from the project activity.
Additional comments	-

Data/Parameter	**Carbon content in coal**
Unit	%
Description	Carbon content of coal used in the project activity
Measured/calculated/ default	Measured
Source of data	Test reports
Value(s) of monitored parameter	Not Applicable
Monitoring equipment	Not Applicable
Measuring/reading/recording frequency	Recording Frequency: For each batch of coal
Calculation method (if applicable)	Not Applicable
QA/QC procedures	Coal has not been used by the project proponent in the current monitoring period.
Purpose of data/parameter	Calculation of the project emissions from the project activity.
Additional comments	-

D.3. Implementation of sampling plan

>>
Sampling is not required for the given project activity

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

>>
Baseline Emissions (BE_y)

The baseline emissions have been calculated as per the formula presented in section E.1.2.4 of the registered PDD:

$BE_y = EF_y \times EG_y$

Where:

BE_y - are the baseline emissions due to displacement of electricity during the year y in tons of CO_2
EG_y - is the net quantity of electricity generated by the project activity during the year y in MWh, and
EF_y - is the CO_2 baseline emission factor for the electricity displaced due to the project activity in tons CO_2/MWh

EG_y = 93,809.60 MWh
EF_y = 0.942 tCO_2 e/MWh.
BE_y = 93,809.60 MWh x 0.942 tCO_2e/MWh
= 88,367 tCO_2e

E.2. Calculation of project emissions or actual net removals

>>
As per registered PDD section E.1.2.1 project emissions would take place from the combustion of coal in the project activity. Since, no coal has been consumed in the current monitoring period, project emissions have not been considered.

E.3. Calculation of leakage emissions

>>
As per registered PDD section E.1.2.1 leakage emissions from the transportation of biomass have been ignored.

Further, as per "General guidance on leakage in biomass project activities" Version 03 Paragraph 18, the project participant is required to evaluate once in the beginning of the crediting period if biomass is available in surplus in the region. If it is demonstrated that the surplus biomass is at least 25% larger than the consumption of the region, then leakage emissions due to competing uses of biomass can be neglected.

In accordance with this guidance, an independent third party (Pranam Consultants) prepared a biomass assessment report dated 06 February 2009 in the fourth monitoring period of the project activity. The major findings of the study with respect to the fuels used in the current monitoring period are tabulated below:

Crop	Generation (MT)	Consumption (MT)			Surplus (MT)	Surplus as % of Consumption
		Muktsar District	MPPL	Total		
Mustard Husk	10,165	0	4,637	4,637	5,528	119.22%
Wheat Straw	1,107,917	644,361	30,104	674,465	433,452	64.27%
Paddy Waste	431,280	239,609	5,018	244,628	186,652	76.30%
Cotton Stick	105,699	0	29,399	29,399	76,300	259.53%

Since, all fuels are available in more than 25% surplus of the consumption; leakage emissions due to the competing use of biomass have been neglected.

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or baseline net GHG removals (t CO_2e)	Project GHG emissions or actual net GHG removals (t CO_2e)	Leakage GHG emissions (t CO_2e)	GHG emission reductions or net anthropogenic GHG removals (t CO_2e)			
				Before 01/01/ 2013	From 01/01/ 2013 until 31/12/ 2020	From 01/01/ 2021	Total amount
Total	88,367	0	0	0	88,367	0	88,367

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period (t CO_2e)	Amount estimated ex ante for this monitoring period in the PDD (t CO_2e)
88,367	102,126

E.5.1. Explanation of calculation of "amount estimated ex ante for this monitoring period in the PDD"

>>
Estimated Emission Reduction according to PDD = 43,854 tCO_2e per annum
Total number of days in this monitoring period = 850 days

The ex-ante estimated ER for the current monitoring period has been calculated by factorizing the annualized projected ER value for the equivalent days of the current monitoring period.

= (43,854 * 850) / 365 = 102,126 tCO_2e

E.6. Remarks on increase in achieved emission reductions

>>
During the present monitoring period, actual emission reductions achieved are 88,367 tCO_2e whereas estimated emission reductions was 102,126 tCO_2e.

The emission reductions generated in the current monitoring period are 13.47% lower than the estimation for the period in the registered PDD because of the lower Plant Load Factor (PLF) attained in the current monitoring period by the project activity than that assumed in the registered PDD.

E.7. Remarks on scale of small-scale project activity

>>
The installed capacity of the plant is still 7.5 MW which is less than 15 MW. The project activity is still a small-scale project activity.

Appendix I: Calibration Details

For Parameter Energy exported and Energy imported

	Main Meter	Check Meter
Type:	Electronic Trivector Energy meter	Electronic Trivector Energy meter
Accuracy Class	0.5	0.5
Serial number	04180597	04180598
Model No.	ER300P	ER300P
Calibration frequency	Six months	Six months
Date of Calibration	**22/10/2012**	**22/10/2012**
Due Date of Calibration	21/04/2013	21/04/2013
Date of Calibration	**17/04/2013**	**17/04/2013**
Due Date of Calibration	16/10/2013	16/10/2013
Date of Calibration	**15/10/2013**	**15/10/2013**
Due Date of Calibration	14/04/2014	14/04/2014
Main and Check Meter are Replaced With Following Meter		
Serial number	**13197009**	**13197010**
Accuracy Class	**0.5**	**0.5**
Date of meter replaced	**24/03/2014**	**24/03/2014**
Date of Calibration	**11/04/2014**	**11/04/2014**
Due Date of Calibration	10/10/2014	10/10/2014
Date of Calibration	**02/10/2014**	**02/10/2014**
Due Date of Calibration	01/04/2015	01/04/2015
Date of Calibration	**26/03/2015**	**26/03/2015**
Due Date of Calibration	25/09/2015	25/09/2015

For Parameter Gross Energy generated

Type:	Electronic Energy meter	Date of Calibration	Due date of Calibration
Accuracy/Uncertainty Level	0.5	08/05/2012	07/11/2012
Serial number	04249596	05/11/2012	04/05/2013
Model No.	ER300P	02/05/2013	01/11/2013
Meter Manufacturer	L&T	02/11/2013	01/05/2014
Measurement principle	4 quadrant bidirectional meter	26/04/2014	25/10/2014
Measurement range	0 – 99,999,999	23/10/2014	22/04/2015
Location	Power Plant Control Room		
Calibration frequency	Six months		

For Parameter Auxiliary energy consumption

Type:	Electronic Energy meter	Date of Calibration	Due date of Calibration
Accuracy/Uncertainty Level	1	08/05/2012	07/11/2012
Serial number	63116/3171-0405	05/11/2012	04/05/2013
Model No.	ELF-3234	02/05/2013	01/11/2013
Meter Manufacturer	Enercon	02/11/2013	01/05/2014
Measurement principle	3 phase 4 wire Electronic energy meter	26/04/2014	25/10/2014
Measurement range	0 – 9,999	23/10/2014	22/04/2015
Location	Power Plant Control Room		
Calibration frequency	Six months		

For Parameter Biomass Quantity/Consume

Load Cell

Type:	Load Cell	Date of Calibration	Due date of Calibration
Serial number	167205	15/05/2012	14/05/2013
Accuracy/Uncertainty Level	±5 %	15/04/2013	14/04/2014
Model No.	BR011L0	10/04/2014	09/04/2015
Capacity	10 MT	06/04/2015	05/04/2016
Location	Belt Conveyer		
Calibration frequency	Annually		

Weighbridge

Type:	Electro-Mechanical Weighbridge	Date of Calibration	Due date of Calibration
Make	Leotronic	06/04/2013	05/04/2014
Serial number	EDS501	28/03/2014	27/03/2015
Accuracy/Uncertainty Level	5/10 kg	13/03/2015	12/03/2016
Capacity	30 MT	10/06/2015	09/06/2016
Location	Before Fuel Yard		
Calibration frequency	Annually		

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Document information

Version	*Date*	*Description*
08.0	6 April 2021	Revision to: • Reflect the "Clarification: Regulatory requirements under temporary measures for post-2020 cases" (CDM-EB109-A01-CLAR).
07.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM project standard for project activities" (CDM-EB93-A04-STAN); • Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period; • Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods; • Make editorial improvements.
06.0	7 June 2017	Revision to: • Ensure consistency with version 01.0 of the "CDM project standard for project activities" (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from *F-CDM-MR* to *CDM-MR-FORM*; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.

Version	*Date*	*Description*
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB 70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.

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