

Gold Standard Monitoring Report

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4.5 MW Biomass (low density Crop Residues) based Power Generation unit of Malavalli Power Plant Pvt Ltd.

UNFCCC Reference No: 0298

GS Reference No.: GS343

Last Verification of First Crediting Period

Monitoring Period: 01/10/2007 – 31/07/2008

Net Emission reductions: 8,181 tCO₂e

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1. Introduction

This Monitoring Report has been developed for the purpose of the Gold Standard verification exercise for greenhouse gas emission reductions achieved by the project activity titled “4.5 MW Biomass (low density Crop Residues) based Power Generation unit of Malavalli Power Plant Pvt Ltd.” and subsequent certification as per requirements of the UNFCCC Methodology Type I.D, for the period 01/10/2007 – 31/07/2008.

The information contained in this Monitoring Report corresponds to the Gold Standard verification criteria that are over and above the CDM verification criteria that are contained in the CDM Monitoring Report, available on the UNFCCC website:

http://cdm.unfccc.int/filestorage/V/G/M/VGMQOS1P7EiWB8ANCF3KT56RU42JLD/0298_REVISED%20CDM%20MR-OCT07-JULY08.pdf?t=WDd8bTNoa3E3fDB9F0csUejcPGajGZorK6E

The verification has been conducted by an accredited Designated Operational Entity: DNV. The verification report is available on the following link:

http://cdm.unfccc.int/filestorage/B/1/0/B10N4TFZ5UEJRWSL396I2QVPYKMOC8/298%20VR2.pdf?t=dU18bTN oa3YyfDB_0-0ZI0poojUO6X6GCAar The project was registered with CDM Executive Board on 21 July 2006 and was completed as planned and described in the Project Design Document (PDD). The project has been verified in the past and has issued (or in the process of issuing) Gold Standard Certified Emission Reductions (GS CERs) for the following vintages:

1st crediting period:

1. First Monitoring Period – 01 August 2001 to 30 June 2006 – 77, 294 GS CERs
2. Second Monitoring Period – 01 July 2006 to 30 September 2007 – 17,160 GS CERs
3. Third Monitoring Period – 01 October 2007 to 31 July 2008 – 8181 CERs ; CERs issued Block start: IN-5-139820512-1-1-0-298 Block end: IN-5-139828692-1-1-0-298

2nd Crediting period:

4. First Monitoring Period - 01 August 2008 to 30 April 2009 – 9,211 GS CERs issued
5. Second Monitoring Period – 01 May 2009 to 30 June 2010 – 15,036 GS CERs – GS CERs issued

The project has been promoted by M/s. Malavalli Power Plant (P) Ltd.

CER data

Sl. No.	Period	Electricity Generated (kWh)	Electricity exported in (kWh)	Electricity Imported in (kWh)	Electricity exported in (kWh) after correction	Electricity imported in (kWh) after correction factor	Net electricity exported in (kWh) after correction	Net electricity exported in (GWh)	Baseline Emission Factor in tCO ₂ /GWh	Baseline Emissions in (t CO ₂ e)	Biomass used (MT)	Total Diesel Consumed in KLtrs	Leakages due to transportation of biomass in (tCO ₂ e)	Certified Emission Reductions (t CO ₂ e)
4.5 MW PROJECT: MONTH-WISE MONITORING DATA														
														2007-08
1	1 Oct 2007 to 31 Oct 2007	1543600	1355800	20815	1355800	20815	1334985	1.33	721.93	963.77	2713.89	13.46	37.88	925.89
2	1 Nov 2007 to 30 Nov 2007	1501100	1273600	11500	1273600	11500	1262100	1.26		911.15	2835.52	7.53	21.19	889.95
3	1 Dec 2007 to 31 Dec 2007	1708900	1489000	14260	1489000	14260	1474740	1.47		1064.66	3222.68	7.27	20.45	1044.21
4	1 Jan 2008 to 31 Jan 2008	1523600	1308400	13685	1301858	13753	1288105	1.29		929.92	2679.34	5.68	15.99	913.93
5	1 Feb 2008 to 29 Feb 2008	1624000	1465200	13685	1457874	13753	1444121	1.44		1042.55	2805.07	7.43	20.92	1021.64
6	1 Mar 2008 to 31 Mar 2008	103100	69100	13340	69100	13340	55760	0.06		40.25	199.54	0.63	1.79	38.47
7	1 Apr 2008 to 30 Apr 2008	1394600	1143700	9430	1143700	9430	1134270	1.13		818.86	2483.62	11.45	32.24	786.62
8	1 May 2008 to 31 May 2008	1283060	1146800	15065	1146800	15065	1131735	1.13		817.03	2510.50	12.12	34.11	782.92
9	1 Jun 2008 to 30 Jun 2008	717400	600200	18400	600200	18400	581800	0.58		420.02	1237.85	5.74	16.16	403.86
10	1 Jul 2008 to 31 Jul 2008	2167800	1977400	6325	1977400	6325	1971075	1.97		1422.98	3846.19	17.31	48.74	1374.24
Total		13567160	11829200	136505	11815332	136642	11678690	11.679		8431.197	24534.2	88.624	249.476	8181.721
														CERs
														8181

2 .Monitoring Background

The Sustainable Development Matrix for the project activity is provided in the Gold Standard Annex submitted at the time of GS registration.

The Sustainable Development Assessment Matrix shows that there are no indicators, which would be critical for a positive contribution of the project to Sustainable Development or that are particularly sensitive. Further, the initial stakeholder consultation has not demonstrated any concerns, which would require special monitoring.

Upon approval of the project by the Gold Standard for retroactive validation (Gold Standard communication dated 8 December 2006), the Gold Standard recommended to monitor particulate matter emission levels as additional measure to regular CDM monitoring procedures.

Regular CDM monitoring procedures as specified in the PDD of the project activity account for:

- Determination of project emissions and emission reductions during the crediting period
- Determination of leakage due to transport of biomass and competing uses for biomass resources
- Determination of monitoring method (including data registration, monitoring, measurement and calibration) and the equipment applied
- Quality assurance and control procedures for the monitoring process
- Documentation of all relevant monitoring steps

3. Parameters monitored according to the monitoring plan

The Gold Standard Monitoring Plan includes measurements of particulate emission levels in addition to the regular CDM monitoring procedures. It is also in line with the requirements of the Karnataka state's Pollution Control Board

1. *Monitoring procedures for particulate emission levels:*

Data / Parameter:	<i>EL_{particulateemissions}</i>
Data unit:	Ppm
Description:	Particulate emission levels measured periodically at the stack of the biomass based plant
Source of data to be used:	Periodical measurements carried out according to international standards by qualified professionals with qualified equipment
Measurement procedures (if any):	Particulate emission levels shall be determined based on a stack gas analysis using calibrated analyzers. Measurements shall be carried out according to international standards by qualified professionals with qualified equipment
Monitoring frequency:	Monthly measurements
QA/QC procedures to be applied:	Measurements shall be conducted by qualified institutions, which guarantee for the accuracy of the measurement procedures and equipment.
Any comment:	

4. Monitoring Results

1. Monitoring results for particulate emission levels:

Procedures and Sources/supportive references: The measurements have been conducted monthly by M/s. Amulya Associates (The instrument used for the monitoring of stack emissions is an handy stack sampler from Envirotech-Model APM 620) and M/s. Ganesh Consultancy & Analytical Services (The instrument used for the monitoring of stack emissions is an handy stack sampler from Envirotech -Model VSS-1 & Sl. No. 297 DTA-2007 & Sl. No. 237 DTF-06) an independent external agency.

Results: The results of the suspended particulate matter (SPM) for the monitoring period under consideration, i.e., 01October 2007 2009 to 30 July 2008 are provided below:

Sl. No.	Measurement Month	Measurement Date	SPM Amount (PPM)
1	October 2007	25/10/2007	120.60
2	November 2007	30/11/2007	124.50
3	December 2007	15/12/2007	104.00
4	January 2008	19/01/2008	98
5	February 2008	23/02/2008	90
6	March 2008	31/03/2008	88
7	April 2008	28/04/2008	95
8	May 2008	30/05/2008	92
9	June 2008	30/06/2008	80
10	July 2008	22/07/2008	124
<u>Reference:</u> Monthly measurement reports issued by an independent external agency on the basis of tests conducted.			

Conclusion: The measured values of SPM from stack emissions are well within the maximum limits prescribed by the Karnataka state's Pollution Control Board of 150.00 PPM.

Overall Conclusion:

It can suitably be established that the project has complied with the Monitoring Plan laid out in the Gold Standard Annex and hence the **8,181 CERs** under for the monitoring period under consideration, as per the following year-wise vintage break-up are eligible for issuance under Gold Standard:

Year 2009	01/10/2007 to 31/12/2007	2860 tCO ₂ e
Year 2010	01/01/2008 to 30/07/2008	5321 tCO ₂ e
Total		8181 tCO₂e