

# **MONITORING REPORT**

**MONITORING PERIOD FROM 01/10/2007 TO 31/07/2008**

**“4.5 MW BIOMASS (LOW DENSITY CROP RESIDUES) BASED  
POWER GENERATION UNIT OF MALAVALLI POWER PLANT  
PVT LTD.”**

**Ref: No FR-UNFCCC00000298CDMP**

**Project Site:-**      **MPPL Renewable Energy (P) Ltd**  
Formerly Malavalli Power Plant (P) Ltd  
**Kirugavalu,**  
**Near Santhemaiddana,**  
**Malavalli Taluk, (Mysore-Bannur High way)**  
**Mandya District, Karnataka.**

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## CURRENT STATUS OF THE PROJECT

The 4.5 MW Biomass fired Power Project at Kirugavalu, (Near Santhemaiddana), Malavalli Taluq, Mandya District was commissioned in July 2001

The project was completed with major equipment supplied as follows:

<b><i>S/No.</i></b>	<b><i>Equipment</i></b>	<b><i>Supplier</i></b>
01	Boiler	M/s. IJT – Noida
02	Turbine	M/s. Triveni Engineering & Industries Ltd. – Bangalore.
03	Balance of Plant	M/s Ion Exchange M/s Paharpur Cooling Tower M/s. Avery Weigh Bridge
04	Fuel Handling System	M/s. Manco Engineers - Hariyana

The entire equity was provided by Company and loan taken from IREDA

## **STATEMENT TO WHAT EXTENT THE PROJECT HAS BEEN IMPLEMENTED AS PLANNED**

The project was completed as planned and described in the Project Design Document (PDD)

The plant is in operation continuously (with outages – forced & Planed) since August 2001. The plant is using agriculture wastes, comprising of crop residues like Cane Trash, Coconut fronds, Toppings of Casuarinas & eucalyptus, Mill residues like Saw Mill Waste, Rice Husk etc. as biomass fuel when needed.

## **MONITORING PERIOD**

**The monitoring period is from 01/10/2007 to 31/07/2008**

## **SUSTAINABILITY – ECONOMIC AND SOCIAL WELL- BEING**

The project activity has resulted in sustainable development in the region as follows:

1. Procurement of biomass fuel from local farmers and biomass suppliers has generated additional income and improved economic condition of the community. This has also resulted in local employment generation. Plant has generated employment opportunities directly / indirectly to more than 400 people. As a part of social responsibility, plant has been contributing to social infrastructure by way of employing local people for the plant operations and also paying significant amount as tax for the local Panchayat etc.,
2. Surplus Crop residue is properly used for power generation, which was otherwise burnt in the fields.
3. Project activity has resulted in generation of direct and in-direct employment due to biomass collection, transporting and unloading etc.

## **OBTAINED PARAMETERS ACCORDING TO MONITORING PLAN**

For the project, following parameters were monitored on a continuous basis:

1. **Energy:** Energy meter installed in synchronizing panel for measuring energy generation / Export in hourly basis and recorded by Shift In-charge. Shift reports verified and transferred in soft copy to make monthly report.

2. **Fuel (Biomass):**

Crop residues were procured from farmers, in Carts, Tractor Trolleys, Trucks, etc.

For measuring Weighing scale of 10 MT capacities was installed.

Fuel was handled through Dozer / Man power from storage yard to cutters

Fuel feeding was through belt and Slat Conveyor to bunker & then fed to the boiler through rotary feeders.

All fuels arriving at the plant are weighed and recorded before stocking near feeding points. This weighed stock when charged to the conveyor is recorded as consumption of fuel for each shift. The shift data is then transferred to soft copy to make monthly records.

3. **Moisture Content in fuel:**

Moisture of Crop residue / Biomass will be measured in-house laboratory on daily basis as per the arrivals.

Similar to fuel weight moisture is measured for all incoming fuels and recorded. When consuming, this data is transferred as shift data. The shift data is then transferred to soft copy to make monthly records.

Moisture measurements form the basis of calorific value for fuel. Based on norms fuel with average 20% moisture is correlated with average calorific value of 3000 kCal/kg. Correspondingly the average calorific value of fuel used is arrived at on the basis of actual moisture measured using the above norms.

## EMISSION REDUCTIONS

### Base line emissions:

Carbon Emission Factor as per the baseline adopted (Kg CO<sub>2</sub> / kWh) – 0.8The

**Net Energy Exported (kWh): 1,16,92,695**

**Baseline emissions (ton CO<sub>2</sub>):- 8,955.435**

**Less Emissions due to Transport:- 249.476**

**Net Emissions (ton CO<sub>2</sub>):- 8,705.959**

## **MEASURES TO ENSURE THE RESULTS / UNCERTAINTY ANALYSIS**

The Energy exported to the KPTCL was recorded from Main Energy Meter and cross verified by Check meter same will be calibrated periodically by KPTCL Metering Unit.

KWh Meter located in Control panel is calibrated periodically by us.



## **ROLES & RESPONSIBILITIES**

A CDM team has been formed in MPPL for monitoring and verification of all the monitoring parameters as per the guidelines formulated by the management of MPPL. Qualified and trained people monitor the parameters and emission reduction calculations. In the complete implementation and monitoring plan, MPPL is the sole agency responsible for implementation and monitoring.